

HEADSTART

Designed for students full of talents and dreams who are just beginning the process of exploring their talents and their options, HeadStart encourages the student to first expand his or her world of career choice and then focus it down to the Top Five areas.

HeadStart recommends

- ⇒ Top Five careers that match interests and strengths
- ⇒ Suitable subject streams

ARVIND RAVI

>> YOUR PROFILE	1
ARVIND'S CAREER INTERESTS	2
ABOUT SIGNATURE STRENGTHS	
ARVIND'S SUBJECTS PROFILE	5
>> RECOMMENDATIONS	6
MATCHING ARVIND'S CAREER INTERESTS TO STRENGTHS	7
SUBJECT REQUIREMENTS FOR STAR, SUITABLE CAREERS	8
RECOMMENDED PATH	9
>> DEVELOPMENT RESOURCES	12



>> YOUR PROFILE

This section describes Arvind's

- Career Interests
- •Signature strengths profile
- •Subjects Profile



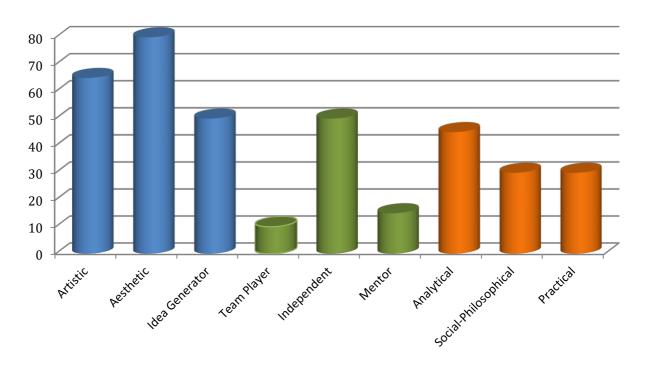
ARVIND'S CAREER INTERESTS

These are Arvind's own interest areas based on our interactive sessions covering over 80 viable and contemporary career opportunities.

High Interest Careers	Medicine: Clinical, Surgery, Diagnostics Engineering: Chemical: Others		
	Biotechnology		
	Scientific Research		
	Computers, Software Development, Networking & Testing		
	Social Sector		
	Art, Painting		
	Design, Graphics		
	Design, Fashion, Interior, Textiles		
	Design, Web, Product		
	International Relations		
Medium Interest Careers ● ●	Architecture Finance: Chartered Accounting (CA)		
	Advertising: Creative		
	Teaching, Middle & Senior		
	Teaching, College & Post Graduate		
	Psychology, Clinical, Child		
	Art, Writing		
Threshold Interest Careers	Management: Sales & Marketing Management: Human Resources Data Science / Data Analysis Journalist: Editor		
	Cinematography		



ARVIND'S SIGNATURE STRENGTHS



CREATIVE STRENGTHS

INTER-PERSONAL STRENGTHS

INTELLECTUAL STRENGTHS

Creative- Artistic/ Aesthetic/ Idea Generator

You have a well-developed sense of what looks good and sounds good. Your aesthetic skills lead you to understand and appreciate that which is tasteful. You enjoy working with colors, textures, layout, musical instruments etc to create appealing visuals and sounds. You are good at learning creative skills and performing.

You thrive on creative expression through the arts - writing, music, painting, drama, sculpture. While you have developed your skills in your chosen artistic domain, you are highly sensitive to all art forms. You are easily inspired by new forms and unique artistic forms and expressions. You enjoy reaching out to people through your art. Though artistic, you are not at all reclusive and you find that you need people interactions to find inspiration. You relate to people easily and enjoy working with others to get things done. You are skilful at building and maintaining effective relationships with new and varied people. You enjoy belonging to a larger team or vision.

Interpersonal-Independent



You work best in your "own" space with minimum distractions. You may or may not enjoy belonging to a team, but your best work is done alone. You are enthused by your own ideas, thoughts and goals. Excellent at setting goals and achieving them, you convert almost all aspects of your life to a project and move from goal to goal. Often uncomfortable when pushed into crowds, you enjoy being with people you know well. You express yourself best in writing or well-researched presentations.

ABOUT SIGNATURE STRENGTHS

A Signature Strength is a bit like a fashion statement – this is who I am. This is Me. I do this naturally, without trying too hard. I love to do this. I don't know why. It's just the way I am.

Based on over 10 years of working across age groups with career choices, Signature Strengths was developed by the Inomi team to be a simple tool for people to identify their core Strengths. This instrument has been vetted by professors and independent consultants who specialise in psychometric evaluations.

A Signature Strength is not limiting. It does not mean that this is all I do or that I am bad at other things. It simply means that when I do this, my natural intelligence takes over; I don't have to watch myself too closely and somehow know what to do. As I use this Strength through my work and life, my skill and effectiveness in this grows. And as I build a life that keeps me more and more in my Signature Strength zone, I enjoy myself and the best of me again and again. And before I know it, I am already in the throes of a life-long love affair with myself!

Can I have more than one Signature Strength? Over the years, we have found that most people have two and some have three. For some, these stand above all other Strengths with compelling authority and for some these are supported by many complementary Strengths. It helps to focus on the top two or top three Strengths and choose work that best leverages these after which one could allow it to tap into all other supporting aspects of the self.



ARVIND'S SUBJECTS PROFILE

Performance and interest across subjects

YOUR SUBJECTS PROFILE

Performance and interest across subjects High Comfort Areas

(Subjects in which you show high to medium performance and high interest)

History & Civics

Geography

Biology

Art

Chemistry

Math

Medium Comfort Areas

(Subjects in which you show high to medium performance but low interest)

Computers

Hindi

Challenge Areas

(Subjects in which you show low performance but medium or high interest)

English Language

Low Comfort Areas

(Subjects in which you show low performance and low interest)



>>RECOMMENDATIONS

In this section, we have put together insights from Arvind's Signature Strengths, subjects profile and career interests to recommend

- Optimal subjects for senior school
- Potential career areas to explore with these



MATCHING ARVIND'S CAREER INTERESTS TO STRENGTHS

	HIGH	Cinematography	Architecture Advertising: Creative Art, Writing	Art, Painting Design, Graphics, Fashion, Interior, Textiles, Web, Product
STRENGTHS>>>	MEDIUM	Sales & Marketing Human Resources Data Science / Analysis Journalist: Editor		Computer Science Scientific Research Engineering: Chemical Biotechnology
	MOJ		Teaching Psychology Chartered Accounting	Social Sector International Relations Medicine
		THRESHOLD NTERESTS >>>	MEDIUM	HIGH

☆Star Careers (High to medium strengths + High Interest)

- ⇒ Art, Painting
- ⇒ Design, Graphics, Fashion, Interior, Textiles, Web, Product
- ⇒ Architecture
- ⇒ Advertising: Creative
- ⇒ Art, Writing
- ✓ Other Suitable Careers (Medium to high strengths + interests)
- ⇒ Computers, Software Development, Networking & Testing
- ⇒ Scientific Research
- ⇒ Engineering: Chemical
- ⇒ Biotechnology



SUBJECT REQUIREMENTS FOR STAR, SUITABLE CAREERS

	İ
Art, Painting	-
Design: Graphics, Fashion, Interior, Web,	-#
Product	Physics, Chemistry, Maths
Architecture	_
Advertising: Creative	
Art, Writing	**
Computers, Software Dev, Networking &	_
Testing	Physics, Chemistry, Maths/Bio
Scientific Research	Physics, Chemistry, Maths
Engineering: Chemical	Physics, Chemistry, Maths/Bio
Biotechnology	

^{**} While most Computer Science and BCA courses require Maths, some universities offer BCA courses to students without Maths

These subject restrictions are mostly relevant for Indian universities. While several foreign universities do not have rigid restrictions, these subjects mentioned would be desirable for these courses.

^{*}Some Interior Design and Product Design courses prefer students with Maths and Physics



RECOMMENDED PATH

A warm and creative person, Arvind, you live with dreams of making a positive impact in the world. A person with diverse interests, you appreciate varied viewpoints to any issue or problem. You like to work alone or in small groups of people. Deeply creative, you are looking for work that allows you to express your creativity.

Artistic careers, while exciting, pose a great deal of challenge on financial and professional stability. The media explosion has led to many television channels, music videos and radio channels. The prospects for Music, Acting, Modeling, Camera, Script Writing etc. are, therefore, better than they were ever before and it is not difficult to get a break. However, it takes 10-20 years and a lot of factors such as diligence, guidance and pure good luck for people with talent to make a financially successful career through art. Successful artists in all fields recommend that you train in and pursue a mainstream career to find your feet while continue your training and practice of your art. You can make a switch to pursuing your art full-time at any stage when you either find financial and emotional security or find good opportunities for expressing your art.

We recommend that you start exploring Design as a career. This is a great time for Designers as corporate growth has led to increased demand for professional Design in all areas: Fashion, Graphics, Products and Interiors – be it commercial offices, shopping malls, restaurants and hotels or residential complexes. There are, therefore, several work opportunities in this field both in terms of formal employment as well as for entrepreneurial and individual Designers. Interior Design and Fashion Design provide growing work opportunities given the spurt in construction and retailing of branded garments in the country.

Graphic Design, on the other hand, will give you opportunities to work in the creative side in Advertising agencies as well. Several graphic designers work in media with television channels and magazines managing graphics, layouts, special effects and presentation. Visual Communication design courses offer both Graphic Design as well as Media inputs. This would be a highly suited course for you. Several Designers set up their own firms – either independently or in partnership – after working in the field for 5-10 years.

The best Design courses are available as 5-year integrated courses right after Class XII and allow you to explore all aspects of Design before you choose a specialization.

There are no subject restrictions in Class XII as such for Design courses, through some institutes prefer students with technical courses. A good portfolio that showcases your creativity goes a long way in improving your chances of



admission and we recommend that you work on building such a portfolio during school.

Architecture also comes close to providing a challenging and fulfilling environment for both your imagination and your technical expertise. Architecture offers ample scope for you to use your skills of analysis and problem-solving and provides you more opportunity to satisfy your goals of creativity, autonomy and wealth. Architects' duties demand a variety of skills like designing, engineering, managerial and supervisory tasks. The challenging part is that it often takes 10-15 years for an architect to establish themselves and get really high-value projects.

Alternately, Computer Science is an ideal vehicle for you to access many creative and high-growth fields. Interaction Design, Game Design as well as Analytics allow creative application of technology in many fields including Finance, Education, Retailing and many others. It will also be an excellent choice to provide a pathway towards Animation, Graphic, Web, UI/UX Design. You can go on to work in Design after completing the course. In a year or so, you should have a fair insight into the attractiveness and suitability of both these career options. If design holds your interest, you will have plenty of opportunities to follow that route.

Scientific Research, particularly applied research and product development also holds your interest and will offer many creative options – though these will also be slow to build and develop.

The recommended subject stream will allow you to explore all these options.

Recommended Subject Stream For Class IX and X

Group I: English Lang and Lit, History & Civics, Geography,

Spanish

Group II: Maths, Physics, Chemistry, Biology

Group III: Robotics & AI*

^{*} We feel that Arvind is studying Art well by himself and can explore technology a little more deeply. The Robotics & AI course is more diverse and creative than the Computer Applications course which focusses on programming alone



Top Careers for you with this subject stream:

- 1. Design, Graphics, Fashion, Interior, Textiles, Web, Product
- 2. Architecture
- 3. Advertising: Creative
- 4. Art: Painting, Writing

Other Suitable careers

- 1. Computers, Software Development, Networking & Testing
- 2. Scientific Research: Applied Research and Product Development
- 3. Engineering: Chemical / Biochemical
- 4. Biotechnology



>> DEVELOPMENT RESOURCES

Short courses, reading resources and videos to learn more about the career areas recommended



EXPLORING DESIGN

SHORT COURSES

US-based

Savannah College of Art & Design

UCLA Design Media Summer Arts Institute

Columbia University summer courses in Visual Arts

Parsons Summer Program

India and Asia-based

Savannah College of Art & Design Hong Kong

ISDI Parsons Summer School in Delhi, Gurgaon, Mumbai, Bangalore, Kolkata

Rhode Island School of Design Gurgaon

UK and Europe-based

2 weeks course in Industrial Design at Quasar Summer School, Rome.

University of the Arts London

Arts University Bournemouth

ONLINE AND DIGITAL RESOURCES

<u>Design Thinking for Innovation</u> by the University of Virginia on Coursera

Visual Elements of User Interface Design by Calarts on Coursera

Introduction to User Experience Design by GeorgiaTech University on Coursera

Fundamentals of Graphic Design by Calarts on Coursera

READING LISTS AND VIDEOS

- 1. The Design of Everyday Things, Donald A. Norman
- 2. Creative Confidence:, David and Tom Kelly
- 3. <u>25 Epic graphic Design Tips for Non Designers</u>
- 4. Essential Graphics/Design Concepts for Non-Designers sign-suite-basics/
- 5. So you want to be an architect- Part 1 to 7 video series by Doug Patt
- 6. How to Design a Print Portfolio by Karen Kavett
- 7. How to Design Your Blog by Jordan Dooling
- 8. How To Become a Graphic Designer in 2016-Roberto Blake
- 9. The First Secret of Great Design | Tony Fadell | TED Talks

EXPLORING ARCHITECTURE

SHORT COURSES

US and Canada-based

Boston University course in Visual Arts

bu.edu/summer/high-school-programs/summer-challenge/seminars.shtml

Pratt Institute, Architecture Summer course

Architecture Career Discovery Program, Rennslaer Polytechnic Institute

Architecture & Landscape Architecture, The University of British Columbia, Vancouver

Architecture: Adaptable Spaces, Rhode Island School of Design

ONLINE AND DIGITAL RESOURCES

Harvard University, The Architectural Imagination

Japanese Architecture and Structural Design, TokyoTech

Models in Architecture – design through physical & digital models, TUDelft

MIT 'Introductory course, A Global History of Architecture'

Making Architecture, IE School of Architecture & Design

Yale University, Roman Architecture

READING LISTS AND VIDEOS

The Story of Buildings: From the Pyramids to the Sydney Opera House and Beyond Patrick Dillon, Stephen Biesty

<u>The Art of Construction: Projects and Principles for Beginning Engineers & Architects</u> *Mario Salvadori, Saralinda Hooker and Christopher Ragus.*

Engineering the City: How Infrastructure Works Matthys Levy, Richard Panchyk

<u>Draw 50 Buildings and Other Structures: The Step-by-Step Way to Draw Castles and Cathedrals, Skyscrapers and Bridges, and So Much More.by Lee J. Ames</u>

Archidoodle: An Architect's Activity Book, Steve Bowkett

Why Buildings Stand Up: The Strength of Architecture Paperback by Mario Salvadori

So you want to be an architect- Part 1 to 7 video series by Doug Patt

Creative Confidence: Unleashing the Creative Potential by David and Tom Kelly

EXPLORING MEDIA

READING LISTS AND VIDEOS (Communication and Public Relations)

- 1. 12 PR Blogs Your Competitors Are Reading (And 3 They Don't Yet Know About)
- 2. <u>The New Rules of Marketing and PR: How to Use Social Media, Online Video, Mobile Applications, Blogs and Viral Marketing to Reach Buyers Directly</u> by David Meerman Scott
- 3. <u>Social Media: Marketing Strategies for Rapid Growth Using Facebook, Twitter, Instagram, LinkedIn, Pinterest and YouTube</u> by John Williams
- 4. Trust Me, I'm Lying: Confessions of a Media Manipulator by Ryan Holiday
- 5. Multimedia Storytelling for Digital Communicators in a Multiplatform World, Seth Gitner

SUMMER PROGRAMS (Communications and Public Relations)

- 1. <u>Summer School Digital Tools For Humanists an introduction</u>, University of Pisa, Italy
- 2. Debating Summer School Program at Yale or Saint Andrews
- 3. <u>Business Communication & Presentation</u>, Capitol Debate

ONLINE COURSES (Communications and Public Relations)

- 1. Business Communications by University of British Columbia
- 2. Effective Business Communication, IIM Bangalore
- 3. <u>Business Communication</u>, by RIT
- 4. Communicating Strategically by Purdue University
- 5. Principles of Public Relations, University of Colorado Boulder
- 6. <u>Integrated Marketing Communications</u>: Advertising, PR, Digital Marketing, IE Business School
- 7. <u>Communication Strategies for a Virtual Age</u>, University of Toronto

READING LISTS AND VIDEOS (Advertising and Marketing)

- 1. Buy Me That: Helping Kids Understand Advertising
- 2. RSA Marketing: Science of Persuasion
- 3. Marketing Lemonade
- 4. Choice, happiness and spaghetti sauce | Malcolm Gladwell
- 5. 45 Fabulous Facebook Advertising Tips & Magic Marketing Tricks
- 6. Don't Buy It get Media Smart
- 7. Read write think

ONLINE AND DIGITAL RESOURCES (for journalism)

Journalism for Social Change, UC Berkeley

Global Muckraking: Investigative Journalism and Global Media, Columbia Univ

The Story of Fake News, Davidson,

Making Sense of News, HK Univ

Fake News, Facts, and Alternative Facts, UMich

Journalism, the future, and you! Michigan State Univ

Transmedia Storytelling: Narrative worlds, emerging technologies, and global audiences, UNSW

Script Writing -Free eBook

Indian Freelance Writers Blog has interesting suggestions on Journalism and Editing

READING LISTS AND VIDEOS (for journalism)

- 1. She Said: Breaking the Sexual Harassment Story That Ignited a Movement, Jodi Kantor
- 2. Are we living in a golden age of journalism Tom Englehardt
- 3. What is Journalism Robert Niles
- 4. Anita Li: The Power of Digital Journalism
- 5. BBC Journalism Skills Principles of Writing Good News
- 6. What is the difference between Expression and Journalism
- 7. <u>John Lloyd on the Future of Journalism</u>
- 8. Lessons in Investigative Journalism Carol Marin

SHORT COURSES (Film Making)

US and Canada-based

ISSOS Summer School at Yale, St Andrews and Cambridge Film summer school

New York University, TISCH School, <u>Summer High School Filmmakers Workshop</u>

UCLA, Digital Filmmaking Summer Institute

Columbia University, <u>Digital Filmmaking: From Initial Concept to Final Edit</u>

Stanford University Social Psychology of Large-Scale Media Interventions

India-based

Inomi prepLABS, Film Making

UK-based

Nottingham Trent university Short course on Film Journalism in the Digital Age

Nottingham Trent University Television Presenting Short course

London College of Communication Summer course Communication & Advertising

READING LISTS (Film Making)

- 1. Television Is the New Television, Michael Wolff
- 2. Writing the TV Drama Series: How to Succeed as a Writer in TV by Pamela Douglas
- 3. <u>I Want My MTV: The Uncensored Story of the Music Video Revolution</u> by Rob Tannenbaum
- 4. Not Just Bollywood: Indian Directors Speak by Tula Goenka
- 5. Speaking of Films by Satyajit Ray
- 6. <u>The Filmmaker's Handbook</u> by Steven Ascher and Edward Pincus
- 7. <u>Film Lighting: Talks with Hollywood's Cinematographers and Gaffers</u> by Kris Malkiewicz
- 8. Painting With Light by John Alton
- 9. Cinematography: Theory and Practice by Blain Brown
- 10. 50 Films That Changed Bollywood, 1995-2015 by Gupta Shubhra

VIDEOS TO WATCH (Film Making)

The Power of Film Playlist



EXPLORING IT

US-based programs

California State Summer School for Mathematics and Science (COSMOS)

Stanford Pre-Collegiate Summer Program: <u>Introduction to Programming</u>; <u>Game Design</u>; <u>Web Technologies</u>; <u>Artificial Intelligence for Robots</u>;

John Hopkins Centre for Talented Youth

Google for Education, Computer Science Summer Institute,

India-based programs

<u>Young Technology Scholars</u>, A introductory program to technology and innovation for Grades 9 to 12

Camp K12, a series of offline courses in app, web, game development for all ages

Videos to Watch

The Promise of Quantum Computers

Don't fear Intelligent Machines, Work with Them by Gary Kasparov

The High Stakes race to make Quantum Computers Work

3 Principles for Creating Safer Al

Can we build AI without listing control over it?

How Computers are Learning to be Creative

The Incredible inventions of Intuitive AI

Reading List

The Soul of a New Machine, Tracy Kidder

Where Wizards Stay Up Late: Origins of the Internet, Katie Hafner, Matthew Lyon

Code: The Hidden Language of Computers, Charles Petzold

<u>Superintelligence: Paths, Dangers, Strategies, Nick Bostrom</u>

Don't Make Me Think, Steve Krug

The Code Book, Simon Singh

Thinking in Systems: A Primer, Donella H. Meadows

Online Courses

CS50's Introduction to Artificial Intelligence with Python, Harvard University

Al for Everyone: Master the Basics, IBM

Introduction to the Internet of Things and Embedded Systems, Univ of California, Irvine

Cybersecurity Specialization, University of Maryland

Cybersecurity Basics, IBM

Introduction to Cybersecurity Tools & Cyber Attacks, IBM

Cybersecurity Fundamentals, Rochester Institute of Technology

PHYSICS

Videos to watch

YouTube Channel: Physics World

Questioning the Universe by Stephen Hawking YouTube Channel: Quantum Gravity Research Harry Cliff: Have we reached the end of physics?

Which Science is the Most Basic? By Cheryl Brin

CERN's SuperCollider by Brian Cox

This telescope might show us the beginning of the universe by Wendy Freedman

Is our universe the only universe? By Brian Greene

How we explore unanswered questions in Physics by James Beacham,

The search for planets beyond our solar system by Sara Seager

YouTube Channel: NWO Physics

Massachusetts Institute of Technology, Department of Physics by WebsEdgeEducation

What the Discovery of Gravitational Waves Means by Allan Adama

Online courses

Mechanics: Motion, Forces, Energy and Gravity, from Particles to Planets from UNSW

Australia (The University of New South Wales)

Particle Physics: an Introduction from University of Geneva Understanding Einstein: The Special Theory of Relativity

BIOLOGY

Video

YouTube Channel: Into Biology YouTube Channel: Bozeman Science

Beginning the Journey: Research Biology by Genetech

A good research question should open doors in biology - Nobel Laureate Bruce Beutler by

NobelPrizeII

50 Good Topics for Research in the Field of Biology by Get Science and Technology,

Biology Research - Regenerating Retina Cells by miamiuniversitycas

Biologist Explains One Concept in 5 Levels of Difficulty - CRISPR | WIRED

Stanford researchers create Interactive Biology Cloud Lab by Stanford

Online Courses

Essential Human Biology: Cells and Tissues from the University of Adelaide

Introduction to Systems Biology from Icahn School of Medicine at Mount Sinai

Advanced NueroBiology II from University of Peking

Understanding Plants - Part II: Fundamentals of Plant Biology by Tel Aviv University

CHEMISTRY

Chemistry Matters: The Life of a Chemist by Nobelprize.org

YouTube Channel: Reactions

YouTube Channel: Royal Society of Chemistry

YouTube Channel: What Chemists Do

YouTube Channel: American Chemical Society

YouTube Channel: C&EN

YouTube Channel: Periodic Videos

The Nobel Prize in Chemistry: Molecular Machines, Explained - Speaking of Chemistry, by

Reactions

Chemistry careers - A day in the work life of a chemist by careersnz

The Line Between Life and Non-Life by Martin Hanczyc,

What the sugar coating on your cells is trying to tell you by Carolyn Bertozzi,

Research Chemist by Gigniks

<u>The Magic of Chemistry</u> - with Andrew Szydlo by The Royal Institution

Careers in Chemistry by York University Career Centre,

Online courses

Chemistry by University of Kentucky

Introduction to Chemistry: Reactions and Ratios by Duke University,

Introduction to Physical Chemistry by University of Manchester,

General Chemistry: Concept Development and Application by Rice University,

EXPLORING ENGINEERING

SHORT COURSES

US and Canada-based

Boston Leadership Institute:

 $\frac{www.bostonleadershipinstitute.com/applied-physics-and-engineering.html}{www.bostonleadershipinstitute.com/engineering-research1.html}$

University of Pennsylvania, The Engineering Summer Academy at Penn

Stanford University, Stanford Pre-Collegiate Summer Institutes

University of Toronto, <u>Da Vinci Engineering Enrichment Program (DEEP)</u> Summer Academy

Unviersity of Connecticut, School of Engineering

GeorgiaTech University Summer programs

India-based

<u>Young Technology Scholars</u>, A introductory program to technology and innovation for Grades 9 to 12

READING LISTS AND VIDEOS

- 1. James Trevelyan "The Making of an Expert Engineer"
- 2. <u>Grand Challenges for Engineering</u>, National Academy of Engineering, Steve Olson
- 3. Engineering: A Very Short Introduction by David Blockley
- 4. 101 Things I Learned in Engineering School by John Kuprena
- 5. The Promise of Quantum Computers
- 6. <u>Don't fear Intelligent Machines, Work with Them</u> by Gary Kasparov

ONLINE COURSES

- Ethics, Technology and Engineering, from Eindhoven Institute of Technology
- 2. The Engineering of Structures Around Us, Darmouth
- 3. <u>Engineering Design for a Circular Economy</u>, TU Delft
- 4. <u>A Hands-on Introduction to Engineering Simulations</u>, Cornell University