

Parth Mehta

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I enjoy being thoughtful and finding answers to intriguing questions. My love for Physics, Computer Science, Game Theory and Card Magic stems from a deep fascination to know. How might one develop effective quantum ML algorithms? Why do people morally condemn chemical weapons when bombs cause more deaths? How does David Blaine predict a randomly chosen card? || *Date of Birth*: July 11, 1997; *Citizenship*: USA; *Languages Spoken*: English, Hindi, Gujarati, Marathi.

EDUCATION

2015 - present **Harvard College, Cambridge, MA.**

- One of only 4 students from India to be accepted and the only one to receive a likely letter for admission.
- Pursuing a Joint Concentration in *Physics* and *Computer Science* with a Secondary in *Statistics*. Coursework includes advance Quantum Mechanics & Computation, Laboratory Electronics, Artificial Intelligence, Algorithms, Markets & Networks, advance Machine Learning; Applied Quantitative finance, Physical Mathematics, and Stochastic Processes.

2013 - 2015 **PACE Junior Science College, Mumbai, MH.**

- Graduated with a First Class and Distinction. First ever student from high school to be admitted to Harvard College.
- Awarded *Student of the Year* and *Best Innovator* award for 'exemplary all round performance' and 'project related vision and work.' Lead more than 5 collegiate events and ceremonies. *Research and project information can be found on my website.*

EXPERIENCE & PROJECTS

Fall 2017 - present **Dynamic Approaches to Shallow Learning CS 281 {Advance ML}**

- Working with Matt Schwartz, a physicist at Harvard, to develop shallow nets with adaptive exponents for ReLU activations.
- Perfectly learning functions, such as the Higgs invariant mass, that can be analysed numerically, can teach us new Physics.

Fall 2017 - present **License Please CS 234r {Topics in Networks}**

- Working with Nicole Immorlica, a senior researcher at Microsoft, to develop an efficient allocation of driving licences in India.
- Market design principles let agents continue providing liquidity, while hassle costs reduce through subsequent subsidisations.

Summer 2017 **University of Cambridge Directed Researcher, Games on Networks**

- Worked with Frederic Moisan, a faculty member of Christ's College, on a game theoretic paper to be published.
- The model extended a novel insight on *Moral Condemnation* to N player poly-matrix games on undirected networks.

Spring 2016 **Cobalt Robotics Intern, Computer Science and Programming**

- Worked for Cobalt Robotics, a robotics and security based startup currently in stealth mode, throughout the semester.

Spring 2016 **Harvard Ventures Undergraduate Comper & Member of VentureWorks**

- One of 15 finalists from initial 70 to successfully complete the comp: interviews, pitches, and discussions with board.
- 1 of only 5 teams, from Harvard College and HBS, selected by VentureWorks, a pre-startup accelerator at Harvard Ventures.

Spring - Summer 2016 **Agile Robotics Laboratory Undergraduate Researcher, UAV flight manoeuvres**

- Engineered mechanical designs for morphing aircrafts on foam by implementing AutoCAD skills and using Co2 laser printers.
- Currently researching algorithms for aggressive UAV flight manoeuvres and fabricating electronic circuitry for precision.

ADDITIONAL INFORMATION

Technical Skills: Python (+pytorch), AutoCAD, Latex, Matlab, Python, OCaml, & C (basic) || **Interests:** Magic, Tennis, & Tabla.

Summer 2015 **TedX Prabhadevi Speaker [tedxprabhadevi.com]**

Gave a talk, *How to Magically Make Math Fun*, as youngest of 13 speakers. Demonstrated the integration of math and card magic.

Spring 2015 **President's Scholarship Program Gold Scholarship recipient**

One of only 2 students from India invited to interview at Georgia Tech for PSP weekend. Of 10,000 applicants, 100 were invited.

Summer 2012 **FIRST Lego League Best project display**

Awarded 1st prize for patented robotic insole for flat feet correction amongst 200,000 participants at Delft University, Amsterdam.

Winter 2011 **Sound and Vision, India Voiceover Artiste**

Awarded 2 years of royalty across Ireland and England for my Patak's Curry voiceover. *Video link can be found on my website.*