Yash Goenka

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Education

- **University of California Berkeley** — Berkeley, CA
  Bachelor of Arts in Computer Science and Data Science — *Expected Dec 2020*
  - **Relevant Coursework**: Data Structures and Algorithms; Discrete Math; Machine Structures and Architechture; Linear Algebra and Differential Equations; Database Systems; Computer Security; Intro to Artificial Intelligence
  - **Societies and Organizations**: The House (Startup Accelerator); Berkeley Hyperloop; Neurotech at Berkeley; Sigma Eta Pi (Entrepreneurship Society); Space Enterprise Berkeley; Effective Altruism; Alpha Kappa Lambda

Experience

- **Iris BCI** — Berkeley, CA
  Co-Founder — *September 2016 to July 2019*
  - **Type using Brain Waves**: Device allows people to type by just thinking of keys that represent alphabets; Marketed to disabled individuals with Locked-In Syndrome, allowing them to type using just their thoughts
  - **Startup Accelerator**: Received funding, working space and mentorship from industry experts, startup founders and VCs. Mentored by Sequoia Capital and Greylock Partners; Find out more at www.freeventures.org
  - **OpenBCI**: Leveraged open-source brain computer interface platform to develop multiple working prototypes
    - Optimized detection of visual and motor imagery based key recognition
    - Implemented open source BCI machine learning classifers to reach accuracy levels of over 71% for specific thoughts
    - Initally utilized Neuromore's cloud independent biosensor and machine intelligence classifiers for prototyping
    - Utilized: Python, OpenBCI Cyton SDK, PyTorch, Flask, Neuromore
- **Berkeley Hyperloop** — Berkeley, CA
  Software Engineer — *August 2017 to Present*
  - **Systems and Control**: Developed systems and control for acceleration, braking and levitation rig. Leading screw actuation and obtained data on forces in order to spec motor requirements
- **Space Enterprise at Berkeley** — Berkeley, CA
  Avionics Engineer — *August 2017 to June 2018*
  - **Project Karman**: Designing the software and hardware that allows Eureka-1 rocket (surpasses 100-km altitude) to communicate with the ground, determine its position in space, modify its flight, and coordinate the timing of key events such as engine ignition, payload separation, and parachute deployment

Projects

- **AI Text Validator** — Berkeley, CA
  Ongoing Individual Project — *May 2019 to Present*
  - **OpenAI**: Developed a forensic tool that validates if a text was generated using popular language model GPT-2 by OpenAI. It can use any textual input and analyze what GPT-2 would have predicted at each position. This is done using Giant Language model Test Room (GLTR) by MIT-IBM Watson AI lab and HarvardNL
  - **CopyLeaks API**: checks for plagiarism, providing another score on top of GPT-2 validation score. Done so that it can be used by teachers to detect AI text generation and plagiarism.
  - **Tensorflow**: Using Tensorflow.js on Kaggle essay scoring dataset to assist with grading certain types of essay. Currently fixing the integration in order for it to work on a pretrained model.
  - **Technolgies Utilized**: Python, Flask, Tensorflow.js, Tensorflow, D3.js, Firebase
- **Shapes Not Colors** — Kolkata, India
  Mobile Application Developer — *January 2015 to April 2015*
  - **iOS application**: Developed a simple iOS game using Swift and Objective-C; Utilized open-source 2D game engine Free Download on iOS App Store (bit.ly/shapesnotcolors).

Skills and Accolades

- **Programming Languages and Technologies**: Python, Java, Solidity, Javascript, SQL, React, Node.js, HTML, CSS
- **Patent**: Method for reduction of graphene oxide to high specific surface area graphene (PatentNo.1179/KOL/2014)