Vijay Pillai

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EDUCATION

Cornell University, Cornell Tech, New York, NY
Master of Engineering in Computer Science, GPA **3.81** **Expected May 2018**

Bard College at Simon's Rock, Great Barrington, MA
Bachelor of Arts in Computer Science **May 2017**

Undergraduate Work Experience: Tutor for Intro to Computer Science, Tutor for Algorithms and Data Structures, Tutor for Object Oriented Programming

ENGINEERING EXPERIENCE

Full-stack Developer, *Cornell Tech + Kaltura collaboration (Product Studio)*, New York, NY **Fall 2017**

- Produced automated road sign detection and management platform for city workers using smartphones mounted on city vehicles in response to challenge posed by Kaltura: "How might we take videos taken on devices and use them to reduce safety risks in the inspection and audit of infrastructure?"
- Facilitated ideation of system design, which poses several potential safety and efficiency benefits for city workers
- Worked collaboratively with diverse interdisciplinary team of MBA, Operations Research, and CS students
- Stack: Python/OpenCV/Android/jQuery

Full-stack Developer (intern)*, Outer Journey,* Great Barrington, MA **Summer 2016**

- Developed web application prototype in travel/reviews sector for pilot program to gain interest from investors and businesses
- Regularly communicated project status, roadblocks, and velocity to management, mapping each to milestones and company vision
- Stack: JavaScript/jQuery/Bootstrap front-end, PHP/SQL back-end

ACADEMIC PUBLICATIONS

A Low-Cost, Feature-Based Color Threshold Selection Approach to Eye-gaze Tracking and a Basis For Gaze Interface
Senior Thesis, Bard College at Simon's Rock **Spring 2017**

- Modified a consumer-grade camera for infrared eye tracking within a $200 budget
- Developed functional software for eye tracking using novel methods (Python/OpenCV)
- Wrote report explaining methodology for IRB review and obtained IRB approval
- Tested software on human subjects following iterative design cycle

A Feature-Based Color Threshold Selection Approach to Pupil Tracking
Conference Paper, 2017 IEEE MIT URTC **June 2017**

- Based on work from undergraduate thesis; accepted, published, and presented at conference

SPECIALIZED SKILLS

Programming Languages: Python, C++, JavaScript, Java, HTML/CSS, C, C#, PHP, SQL
Tools: Docker, Git, Github, Atlassian BitBucket, JIRA, Slack, Arduino, jQuery, Bootstrap, MySQLi, AWS EC2, GCP, React Native, various editors and debuggers
Operating Systems: RedHat and Debian-based Linux (Fedora, Ubuntu, Raspbian, Mint), OS X, Windows
Languages: English (native); Spanish (minimal professional proficiency); Malayalam (limited working proficiency)

LEADERSHIP EXPERIENCE

Founder and Co-President, *Simon's Rock Computer Science Club*, Great Barrington, MA **Fall 2015 - Spring 2017**

- Created student body for encouraging the pursuit of knowledge and involvement in computer science
- Co-organized hackathon with Google on social change and open data for students (attendance 60+)
- Aided growth of college computer science department

Teacher's Assistant, *Intro to Philosophy,* Jinan University, Guangzhou, Guangdong, China **Summer 2014**

- Provided teaching assistance to ~70 undergraduates