

# Vijay Pillai

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## ENGINEERING EXPERIENCE

**Fullstack 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?”
- System produced poses several potential safety and efficiency benefits for city workers
- Worked with diverse interdisciplinary team of MBA, Operations Research, and CS students
- Python/OpenCV/Android/jQuery

**Fullstack 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
- Position required regular meetings with management to communicate current status, roadblocks, and ensure that product was in line with company vision
- JavaScript/jQuery/Bootstrap front-end, PHP/SQL back-end

## SPECIALIZED SKILLS

*Programming Languages:* Python, Java, C++, JavaScript, HTML/CSS, C, C#, PHP, SQL, Go

*Tools:* Docker, Git, Github, Atlassian BitBucket, JIRA, Slack, Atom Editor, JetBrains Pycharm, IntelliJ IDEA, NetBeans, QtCreator, Arduino, jQuery, Bootstrap, MySQLi, AWS EC2, GCP, React Native, PhpMyAdmin, Filezilla

*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)

## 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

## 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**

- Accepted, published, and presented at conference

## 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