Vijay Pillai

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EDUCATION

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

Bard College at Simon's Rock, Great Barrington, MA
Bachelor of Arts in Computer Science   **May 2017**
Courses Tutored: Intro to Computer Science, Algorithms and Data Structures, Object Oriented Programming

ENGINEERING EXPERIENCE

Software Engineer (Full-stack), *New Product Incubation, CX, Cisco Systems,* Research Triangle Park, NC   **July 2018 - Present**
- Enabled team by deploying Kubernetes infrastructure and continuous deployment pipelines for rapid software prototyping
- Designed and built a graph database query system built on dGraph that transforms the way data is queried for network services group. (NodeJS, D3.js, dgraph, Python3, Express.js)
- Designed and built multi-tenant chatbot system that unifies multiple Cisco services knowledge bases. (Apache Kafka, Python3, Cisco Webex Teams, Kubernetes)
- Created network policy deployment audit and search system and proprietary graph encoding for real network deployments that enables network administrators to ensure and verify policy deployment. (Python3, NetworkX, MongoDB, Flask) (Patent currently under review)
- Designed and built modular and efficient NMS query and data redaction system for collecting data from customer premise for use by Cisco network consulting engineers. (Python3, asyncio)

Full-stack Developer, *Cornell Tech + Kaltura collaboration (Cornell Tech 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?" (Python/OpenCV/Android/jQuery)
- 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

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 (JavaScript/jQuery/Bootstrap, PHP/SQL)

SKILLS

Programming Languages: Python, JavaScript, HTML/CSS
Tools: Docker, Kubernetes, Git, NodeJS, MongoDB, Apache Kafka, Splunk, Neo4j, dGraph, D3.js

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

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