Rohit Kommuru

15 Meyer Hill Dr, Acton, MA 01720 | 978-424-8672 | rohitkommuru@gmail.com

Sophomore undergraduate student at the University of Maryland looking for a technology internship. Has previous experience leading and working in teams in quantum computing, computer vision, and synthetic biology. Completed multiple projects using C, Java, and Python, and currently working on developing front end programming skills.

EDUCATION

2021-2025 | University of Maryland - College Park | GPA: 3.50 | B.S. Computer Science w/ Statistics Minor

- **Relevant Coursework:** Intro to Computer Systems, Intro to Object Oriented Programming I & II, Data Structures, Calculus I, II III, Statistics, Linear Algebra, Discrete Math, Algorithms, Organization of Programming Languages
- **Computer Skills:** Proficient in Java, Python, C, Assembly, Linux, Windows 10, OpenCV, MATLAB, HTML, CSS, JavaScript, Ruby, OCaml, Github, Microsoft Office

PROJECTS

- Template Matching: Created a template matching algorithm using OpenCV and edge detection that is able to differentiate between images of normal barrels and traffic barrels
- Document Manager: Developed software in C that is able to create, store, and modify text files using custom Linux commands. Utilized text parsing and I/O to retrieve user input from the command line and generate files.
- Quantum Hardware Comparison: Developed the traveling salesman problem in Qiskit and ran it on IBM's quantum simulators to determine the efficiency of trapped ion and superconducting quantum computers. Presented findings at the annual FIRE summit at the University of Maryland.
- Personal Website: Created a personal website using HTML, CSS, and JavaScript to display professional and academic experience

CERTIFICATIONS

- [PCAP-31-03] PCAP – Certified Associate in Python Programming

EXPERIENCE

FIRE: The First Year Innovation & Research Experience - *Peer Mentor* | Sept 2021- Present

- Working as a peer mentor at the University of Maryland's selective FIRE program. Acts as a bridge between the professor and students, and mentors fellow students on material covered in class and their independent projects in held lab hours.
- Leading a group of students to design and implement an independent quantum machine learning project. Proposal will undergo approval and revision by a professor, and the completed project will be presented at the annual FIRE Summit and other undergraduate research events at the University of Maryland.
- Completed assignments that involved developing onboard software for drones to execute. Used various libraries such as OpenCV, NumPy, and Matplotlib in order to develop detection

algorithms for drones to use. Created a template matching algorithm using the OpenCV library which differentiates between a traffic barrel and normal barrels, with uses on other media.

BioBuilders Club - *Leader* | Sept 2018- June 2021

- Part of the SplinterCell Project team, which used synthetic biology for the removal of splinters. Tested the expression of a TxTI system. Co-author of research paper published in BioTreks journal with medals in Biosafety & Ethics, Scientific Rigor, and Innovation.
- Lead the development of the Blood Clotting Project which uses synthetic biology to accelerate the coagulation of blood in hemophiliacs using genetically modified *E.coli.* Co-author of a design brief published in BioTreks journal which earned the Innovation medal.
- Lead the development of the Legionella Detector Project, which used genetically modified *E.coli* to detect the presence of *Legionella* .spp in water. Co-author of a design brief published in BioTreks journal awarded with Innovation, Scientific Rigor, and Problem Solving medals.

Achieve Taekwondo - *Instructor* | February 2019 - March 2020

- Taught students aged 7 - 15 about stretching, kicking, forms, and other aspects of Taekwondo. Worked in small groups and helped lead the larger class.

Emerson Hospital - *Transport Volunteer* | July 2019 - March 2020

- Transported patients, lab specimens, medicine, and equipment throughout the hospital. Directed hospital visitors to wards and helped them navigate the hospital

Discovery Museums - *Volunteer* | September 2018 - June 2019

- Set up activities and exhibits and engaged with parents and kids on the museum floor. Maintained a safe and friendly environment for customers to explore exhibits and programs.
- Taught children concepts ranging from probability and circuits to physics

PUBLICATIONS

Aashi Agarwal, Samuel J. Dillon, Michael Hu, Xiaoye Jin, Apurva Joshi, **Rohit Kommuru**, Song Leav, Anya Mittal, Hannah Tandang, Henry Tshabalala, Grace Xu, Amanda Zhang. 2021. Bioluminescent Legionella detector. BioTreks. 6(1): 1-4

Nitya Aryasomayajula, Annabella Chen, Soumili Dey, Samuel Dillon, Anne Fu, Apurva Joshi, Paul Kim, **Rohit Kommuru**, Song Leav, Julia Wu, Amanda Zhang. 2020. Synthetic production of Factors VIII, IX, and X to speed up coagulation in hemophiliacs. BioTreks. 5(1):1-5

Nitya Aryasomayajula, Vareesh Balaji, Abigail Dillon, Anne Fu, **Rohit Kommuru**, Zee Kwong, Mukundh Murthy. 2019. SplintErase: Lignocellulose Degradation Using an Extracellular TxTl system. BioTreks. 4(1): 1-5