Rohan Prasad

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Education

University of Illinois at Urbana-Champaign — Champaign, IL

Bachelor of Science in Computer Engineering — GPA: 3.71/4.00 — *Expected May 2022*

- **Concentrations:** Computer Architecture, Robotics, Parallel Programming
- **Selected Coursework:** Applied Parallel Programming (CS 483), Data Structures & Algorithms (CS 225), Computer Systems & Programming (ECE 220)

Skills

Languages: Java, Python, C/C++, JavaScript, TypeScript
Frameworks: Node.js, React.js, Jekyll, RabbitMQ
Developer Tools: Git, Postman, MongoDB, Heroku, CirleCI
Libraries: ROS, Puppeteer, OpenCV

Experience

Intelligent Motion Laboratory — Oct 2019 – Present

Undergraduate Research Assistant — *Urbana, IL*

- Developing TRINA 2.0, the teleoperated robotic intelligent nursing assistant, designing and implementing a central controller and API to actuate components of the robot while handling various controller loops and effective cross-platform communication.
- Designing and implementing models to generate grasp angles from millions of point cloud mesh and fused point cloud images in order to facilitate a computer vision pipeline.
- Implementing **ROS, Python, and C++ algorithms** for motion planning & control with Fetch robotics freight machines and UR5 robotic arms.
- Guided under Professor Kris Hauser.

Woven Money — May 2020 – Aug 2020

Software Engineering Intern — *Seattle, WA*

- Developed financial technology SaaS product (MVP) on an early-stage startup team, used by over **300** customers in the alpha release.
- Wrote automation scripts to facilitate financial actions on a user's behalf, such as requesting a balance transfer or aggregating credit card information for over **15 financial institutions.**
- Used RabbitMQ to enable background job facilitation in mobile-web and react native application.
- Designed an algorithm to evaluate balance transfers between banks based on a user's finances.

Juni Learning — Mar 2020 - Aug 2020

Computer Science Instructor — *Boston, MA*

- Instructed middle/high-school students in multiple levels of Java (fundamentals to APCS) and Python (fundamentals to advanced) during recurring weekly classes for over 250 hours.

Projects

Spotify Jukebox | *Spotify API, JavaScript, Express, Puppeteer, Heroku* — Aug 2020 – Present

- Built a web application using React.js, Node.js, Express, and Puppeteer to enable song queuing to a central player from any device through the Spotify API. Built and hosted on Heroku.
- Automated Spotify's token authentication using headless browser.

3-D 6-DOF Grasp Generation | *ROS, PCL, C++, Python, OpenCV, OMPL* — Jan 2020 – Present

- Designed and implemented computer vision pipeline to facilitate object grasp detection and motion planning on a low latency API to facilitate UR5 robotic arms.
- Developed python API to enable TCP/IP communication between various micro-controllers and subsystems to enable object grasp pipeline.
- Implemented low-latency point-cloud processing for real-time table-top segmentation and grasp generation.

MODIS Cloud Segmentation | *Python, pandas* | Nvidia NCSA AI Hackathon – ***Won Event (1/17)*** March 2020

- Explored the usage of machine learning methods on identifying instances of clouds (pixel level) on Satellite images from the MODIS satellite cluster.