Rohan Prasad

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Education

The University of Illinois at Urbana-Champaign *May 2023*
Bachelor of Science, Computer Engineering **GPA:** 3.71
Concentrations: Computer Architecture, Robotics, Parallel Programming
Selected Coursework: Operating Systems (ECE 391), Programming Languages & Compilers (CS 421), Applied Parallel Programming (CS 483), Data Structures & Algorithms (CS 225), Computer Systems & Programming (ECE 220)

Experience

Squarespace - Incoming Software Engineering Intern Summer '21
Java, Go, Python
Incoming Back-end Engineering Intern

NVIDIA - Software Engineering Intern Feb '21 - Present
C++, Python, x86, Perl
Currently Interning on the NVLink & GPU Architecture team

Woven Money - Software Engineering Intern May '20 - Aug '20
Typescript, Javascript, RabbitMQ

- Developed financial technology SaaS product (MVP) on an early-stage startup team, used by over 300 customers in the alpha release.
- Wrote automation scripts in Typescript and Javascript, with Puppeteer 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 service-oriented architecture in mobile-web and react native application.

Research

Intelligent Motion Laboratory Research Assistant Oct '19 - Present
C++, Python, ROS, PCL, OpenCV

- 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.
- Implementing ROS, Python, and C++ algorithms for motion planning & control with Fetch robotics freight machines and UR5 robotic arms.
- Guided under Professor Kris Hauser.

Skills

Languages Java, Python, C/C++, Haskell, x86 **Familiar with** Typescript, Javascript
Technologies CUDA, ROS, OMPL, Puppeteer, OpenCV, RabbitMQ

Projects [github.com/rohanp9000]

3-D 6-DOF Grasp Generation
ROS, PCL, C++, Python, OpenCV, OMPL

- 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.

Image Histogramming Equalization
C, C++, CUDA

- Parallelized histogram equalization computation of input image using C++ and CUDA.
- Implemented Cumulative Distribution Function of image histogram and increased throughput by 220% through kernel fusion.

Spotify Jukebox
Spotify API, Node.js, React.js, Express, Heroku

- 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.