# 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 2023*

- **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), Analog Signal Processing (ECE 210)

## Experience

**Squarespace** — New York, NY

*Incoming Software Engineering Intern* — *Present*

- Incoming Summer 2021 Software Engineering Intern

**Woven Money** — Seattle, WA

*Software Engineering Intern* — *May 2020 – Aug 2020*

- 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.
- Designed an algorithm to evaluate balance transfers between banks based on a user's finances.

## Research

**Intelligent Motion Laboratory** — Urbana, IL

*Undergraduate Research Assistant* — *Oct 2019 – Present*

- 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++, JavaScript, TypeScript
**Technologies**: CUDA, Node.js, React.js, Jekyll, RabbitMQ, ROS, OMPL, Puppeteer, OpenCV
**Developer Tools**: Git, Postman, MongoDB, Heroku, CirleCI

## Projects

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

- 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* — Oct 2020 – Nov 2020

- 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* — Aug 2020

- 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**.

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

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