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EDUCATION

Rochester, NY **Rochester Institute of Technology** **(Expected) May 2021**

- Master of Science in Computer Science. GPA: 3.85/4
- Graduate Coursework: Advanced Object-Oriented Programming; Data Structures; Computer Networks; Foundations of Algorithms; Parallel Computing; Quantum Computing; Homomorphic Encryption.

Udacity **Full Stack Nanodegree** **May 2019 – July 2019**

- Built a tool to analyze website data from an SQL database containing over a million records.
- Created a secure database-backed web application with full CRUD capability.
- Deployed the web application to a secure, live web server (Amazon AWS – LightSail)
- Technologies used: Python, Flask, JavaScript, PostgreSQL, SQLAlchemy, WSGI, Apache, Git, AJAX

Manipal, Karnataka **Manipal Institute of Technology** **August 2014 – August 2018**

- Bachelor of Tech in Information Technology. GPA: 7.68

EMPLOYMENT

Software Developer, Co-Op **Motorola Solutions** **January 2020 – August 2020**

Software Developer on the drone team (Django, Angular, Google Cloud Platform)

- Identified and fixed critical race conditions in the Angular App resulting in 100% reliable translations.
- Load tested the backend using Locust by simulating API calls.
- Improved the performance of an API in Django resulting in 95% faster response times.
- Created CI/CD pipelines (Azure Pipelines) to deploy microservices in parallel to Google App Engine, which decreased time to deploy by 85%.

Full Stack Intern **Avalon Labs** **December 2017 – July 2018**

- Programmed a link shortening application. Used indexes to reduce lookup time to $\mathcal{O}(1)$.
- Created and managed payment gateways (PayPal and Stripe API).
- Developed a Chrome Extension by adding custom RESTful routes to allow quicker link creations.

SOFTWARE PROJECTS

Katalog: github.com/a3y3/Katalog **Flask based CRUD app** **May 2019 – June 2019**

- Developed an item cataloger in Python with Flask, with focus on scalability and performance.
- Integrated Google OAuth 2.0 for secure logins.
- Eliminated the 'n+1 query problem' by doing complex joins on three separate tables.
- Hosted the app on Amazon AWS with Apache & secured the server with firewall and restricted access.

Ripcom: github.com/a3y3/Ripcom **Network Simulator + Protocol** **February 2019 – April 2019**

- Implemented RIPv2 in Java including Split Horizon, Poisoned Reverse and Triggered Updates.
- Developed Ripcom Protocol, a reliable protocol over UDP that uses fewer packets than TCP.
- Tested custom router topologies using Docker containers.

Beats: github.com/a3y3/Beats **Online Music Player** **October 2016 – December 2016**

- Implemented circular queues to enable features like play, pause, shuffle and repeat.
- Used HTML5 audio to play music and jQuery to load the circular queue from songs on the current page.
- Developed a functionality that recommends songs based on frequency of listening to them.

LANGUAGES AND TECHNOLOGIES

- Java; Python; Ruby; PHP; SQL; PostgreSQL; JavaScript, jQuery, HTML, CSS; Bootstrap; REST API
- Django; Angular; Docker; docker-compose; Google Cloud Platform; Azure Devops, Azure Pipelines; Ruby on Rails; Flask; SQLAlchemy; Git; HTTP, TCP, UDP