Omar Amin

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Education

- **Cornell University** — Ithaca, NY
  Master of Engineering in Computer Science — *Aug. 2020 – Present*
- **Stony Brook University** — Stony Brook, NY
  Bachelor of Science in Computer Science; GPA: 3.76 — *Aug. 2015 – May. 2020*

Experience

- **American Express** — New York City, NY
  Software Engineer Intern — *Summer 2019 and Summer 2020*
  - **Know Your Customer**: Improved customer service representatives' productivity by 10% by automating the KYC process by using Netflix Conductor to orchestrate workflows and by working with ML team to implement a document classification and an optical character recognition API.
  - **Document Classification Trainer**: Reduced training time by over 300% by building an intuitive and easy to use React interface for labeling documents from AWS S3 and automatically updating the corresponding ML model.
  - **OneDrive Metrics Dashboard**: Optimized migration time by 15% by providing key insights and analytics by systematically collecting metadata, and by visualizing it using Microsoft Power BI as company's cloud storage was migrating to OneDrive.
  - **Subscription Manager**: Won first place in a hackathon out of 40 teams by creating a service for managing customers' subscriptions and providing analytics.
- **Stony Brook University** — Stony Brook, NY
  Teaching and Research Assistant — *Spring 2019 and Fall 2019*
  - **Head Teaching Assistant - Algorithms**: Increased class median by 5% by leading a team of 4 undergraduate TAs, holding weekly review sessions, and creating effective practice exams.
  - **Research Assistant - Algorithms**: Compiled over 100 exercises and diagrams for *The Algorithm Design Manual*.

Projects

- **Hack Together** *Flask, React*: Website for people to simultaneously compete in solving algorithmic questions, which can be queried by difficulty, topic, and company.
- **College For Me** *Django, React*: Website for high school students to record their college applications and to get intelligent recommendations and metrics.
- **Xv6 Projects** *C, Intel x86*: Various projects involving MIT's port of the UNIX v6 operating system such as a shell, a new thread scheduling algorithm, utilities, virtual memory, and a file system.
- **Asynchronous Job Server** *C, Linux*: High performance Linux server utilizing the latest system calls that accepts concurrent jobs from clients and provides accounting and resource information.
- **Malloc Library** *C*: A wrapper over malloc that's able to detect and report common C bugs involving pointers and memory corruption. In addition, I created a specialized memory allocator that utilizes segregated quick lists.

Programming Skills

- **Languages (10000+ lines of code)**: Python, C, Java
- **Technologies**: Django, React, Spring Boot, AWS, Google Cloud

Courses

- **Graduate**: System Security, Wireless and Mobile Networks; *Intented:* Machine Learning, Natural Language Processing, Entrepreneurship for Scientists and Engineers, Distributed Systems
- **Undergraduate**: Operating Systems, Computational Geometry, Data Science, Artificial Intelligence

Additional Experience

- **Professional Gamer** — Los Angeles, CA
  Game: League of Legends; Team: Counter Logic Gaming — *Dec. 2016 - May. 2018*
  - **Competitions**: On a sabbatical from university, I competed internationally in *League of Legends* tournaments for the team, *Counter Logic Gaming*. I was recruited after placing top 10 out of a million players on the solo rankings.