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Dung Le

Education

Bachelor of Science in Computer Science, *University of Rochester* *Expected Dec. 2021*
Major GPA: 3.82/4.00
Courses: Parallel & Distributed Systems, Computer Vision, Computer Organization, Database Systems, Design & Analysis Algorithms, Computational Statistics, Web Programming, Data Structures & Algorithms.

Technical Skills

Languages: C/C++, Python, Java, PHP, SQL, HTML, JavaScript.
Technologies: Spring, Docker, React, Cassandra, NGINX, GraphQL, Redis, Flask, Memcached, RabbitMQ.
Experiences: C/C++ concurrency, Linux kernel.

Experiences

Amazon Web Services, *Software Engineer Intern* *May 2020 - Aug. 2020*

Got It, Inc, *Software Engineer Intern* *May 2019 - Aug. 2019*
- Developed an CI/CD tool using **AWS Python SDK**, **Python**, **Flask**, **SQLAlchemy**, and **Google Oauth 2.0** to improve CI/CD process by **1.5x**.
- Used **Memcached** to implement an in-memory data storefront for users' questions that decreases API calls by **30%** for resource-intensive queries and **Redis** to execute background tasks asynchronously.
- Created customized unit testing framework with **Pytest** and UI testing framework with **Selenium**.

ELCOM, *Software Engineer Intern* *May 2018 - Aug. 2018*
- Used **Python**, **Flask**, and **Socket.IO** to implement an internal web portal that routes digital documents to the designated departments to reduce document processing time from **1 business day to 2 hours**.

Awards & Honors

24th National (out of 500 university teams): *ICPC North America Championships 2020* ***C++***
6th National (out of 500 university teams): *ICPC North America Championships 2020 Dress Rehearsal* ***C++***
2nd place: *Google Cloud Hero 2020* ***Google Big Query***
6th place (out of 20 university teams): *ICPC Northeast North America Regional Contest 2019* ***C++***
1st place: *Google Tech Challenge 2019* ***C++***

Projects

Adyio, *Web Services* *Mar. 2019 - Now*
- Used **PHP**, **HTML**, **CSS**, **JavaScript**, and **MySQL** to create a website that helps students find their gaming companions based on common interests.
- The website handles more than **40** daily matchings at peak with over **1500** active accounts.

Gaussian Elimination, *Parallel Computing* *Jan. 2020 - Feb. 2020*
- Implemented a **C** parallel version of Gaussian Elimination algorithm with POSIX threads.
- Bound multiple threads with processor affinity to increase cache locality and minimize false sharing.
- Averaged **70%** speedup and **96%** cache hit ratio on input matrices of size 5000.

Distributed File System, *Distributed Systems* *Dec. 2019 - Now*
- Built a **Dockerized** Distributed File System modeled on Facebook's Haystack paper to efficiently store and retrieve new and long-tail images.
- Configured **NGINX** as a reverse proxy and load balancer to route client requests to **Node.js** servers.
- Implemented multiple Haystack Stores with **Cassandra** and Cache servers with **Redis**.

EZPing, *Web Services & Distributed Systems* *Oct. 2019 - Jan. 2020*
- Built a scalable real-time chat app with multi-node architecture using **Java**, **Spring**, and **Docker**.
- Scaled application horizontally with **RabbitMQ** to handle multi-node users' subscriptions.
- Mirrored distributed storage with **Cassandra** in 6 LAN-connected computers for high writes performance.

Kronos, *Web Services* *Nov. 2019 - Jan. 2020*
- Built a stock watcher website using **React**, **Python**, **Flask**, and **Docker** to link stock price movements to relevant new articles fetched with **Google Custom Search API**.
- Built **GraphQL APIs** with **Graphene-Python** for more efficient and declarative data fetching.
- Archived articles and stock price snapshots with **Cassandra** for real-time news and low latency data access.