Cedric Nagata

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Education

University of Washington Seattle, WA

BS in Computer Science, GPA: 3.71/4.0 June 2024

Interdisciplinary Honors College

Relevant Coursework: Systems Programming, Data Structures and Algorithms, Artificial Intelligence, Machine Learning, Networks, Computer Security, Data Management & Querying

Relevant Experience

Tyler Technologies

Product Analyst Intern **June – September 2023**

- Used Docker to set up a local development environment with connected images for Django, Form.io, Elasticsearch, and PostgreSQL
- Created a secure website function for document sharing using Django, Python, and Form.io
- Created an urgent splash messages function using Django and Python

Tyler Technologies

Product Analyst Intern **June – September 2022**

- Created a query function for an Elasticsearch database with Django, Python, and Form.io
- Created an advanced search interface with search filters using Django and HTML

Technical Skills & Projects

Programming & Frameworks: Python, Java, C, C++, JavaScript, HTML/CSS, SQL, Django, React

Software Applications: Docker, Git, Linux, Azure, PostgreSQL, Elasticsearch

Distributed Key-Value Service (Java)

- Created a scalable, fault-tolerant, distributed database system, similar to Amazon's DynamoDB
- Utilized sharding by mapping keys to shards and distributing workloads with a load-balancer
- Used Paxos to build replicated state machines comprised of servers to serve each shard

Flight Service App (Java, SQL, Azure)

- Designed and coded functions for a Flight Service App including creating users, secure logins, searching for flights, creating itineraries, booking flights, and storing reservations
- Created a Java backend and used SQL to query against a flight database in Microsoft Azure
- Implemented concurrency to rollback conflicting commits and ensure no double bookings

Multithreaded Web-Based Search Engine (C/C++, HTML)

- Implemented a memory-to-disk index marshaller to convert a file subtree into a file index in an architecture-neutral format
- Made a file indexer to service lookups from the index and a query processer to query the index
- Created a multithreaded web server to host the query processor and hold client connections

Leadership

UW Society for Advanced Rocket Propulsion (SARP) – ACS Project Lead **2021 – 2023**

- Led a team of six developing software and hardware for Advanced Control Systems (ACS)
- Used Thrust Gimbaling and a Reaction Control System (RCS) to guide a rocket outside Earth's atmosphere