Cedric Nagata

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Summary of Qualifications

- **Software Development** (Python, Java, C/C++, JavaScript)
- **Application & Web Development** (HTML/CSS, Django, Docker, Git/GitHub)
- **Data Management** (SQL, SQLServer, MongoDB, PostgreSQL, Elasticsearch)
- **Leadership** (Public Speaking, Project Management Skills, Gracious Professionalism)

Education

B.S. in Computer Science | University of Washington – Seattle ***Graduation: 2024***

- **Paul G. Allen School of Computer Science & Engineering**
- **Interdisciplinary Honors College**

Technical Experience

Tyler Technologies, Software Engineering Intern ***(2022, 2023)***

- Specialized in Python development, Django framework, and HTML/CSS
- Created a Cloud-Native Records Management System (RMS) for police departments using Python, Django, and Elasticsearch
- Created a search interface using Elasticsearch API and Form.io to parse & search records

Software Projects

Search Interface for Police Departments (Python, Django, HTML/CSS, Docker, Elasticsearch)

- Used Elasticsearch API to gather incoming service calls for dozens of Police Departments across the U.S.
- Developed a Python backend to filter data and provide high-speed search functionality for hundreds of thousands of incoming calls
- Created a secure share functionality to share form submissions with those outside the company organization
- Created an search functionality using Form.io to search calls by Incident #, location, etc

Distributed Key-Value Service (Java)

- Created a scalable, fault-tolerant, distributed database system, similar to Amazon's DynamoDB service
- Utilized Sharding by mapping keys to shards and balancing server workloads with a custom load-balancer
- Implemented the Paxos Algorithm to build replicated state machines comprised of servers to serve each shard and the load-balancer

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 for flights, and storing reservations
- Used SQL Prepared Statements to query against a flights database in Microsoft Azure
- Created a Java backend to process flight and user data for each function
- Implemented concurrency to rollback conflicting commits and ensure no double

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

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

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Leadership & Volunteer Experience

UW Society for Advanced Rocket Propulsion (SARP) – ACS Project Lead ***(2021, 2022, 2023)***

- Leading a team dedicated to the software, design, and fabrication for Advanced Control Systems (ACS)
- Implementing Thrust Gimbaling and a Reaction Control System (RCS) to guide a rocket outside Earth's atmosphere