

WANDA SONG

Honours Software Engineering Student, University of Waterloo

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EDUCATION

University of Waterloo · Bachelor of Software Engineering
Cumulative GPA: 4.00 (93%)

2019 - Expected 2024

WORK EXPERIENCE

ThoughtWire · Software Engineering Intern

Jan - Present

- Developed workflows to store medical data of patients into databases using Javascript, SQL, and RDF Sparql
- Reworked UI of application to enforce authentication before allowing import of patient data using Javascript
- Programed patient match feature that would POST a rest endpoint and verify if data source contained patient data
- Designed UI error handling for various patient search and import errors

Fairventures Lab · Software Engineering Intern

May - Aug 2020

- Trained **NLP models** to perform entity extraction on business documents with **above 90% accuracy and recall** with Google AutoML and Cortical Contract Intelligence
- Automated the generation and redaction of PDF documents for model training with a speed of 8 pages/s using Bash and Python, saving roughly **20 hours of engineer time**
- Created a **GraphQL** endpoint to aggregate business registration database APIs to support underwriters with insurance risk evaluation using **Typescript** and GraphQL-Mesh
- Refactored FVLab's Blog API from gRPC to GraphQL and enabled article indexing using Elasticsearch by interacting with a webhook REST endpoint
- Contributed to **open source projects**: graphql-mesh (<https://github.com/Urigo/graphql-mesh>) and TheOrgBook (<https://github.com/bcgov/TheOrgBook>)

EXTRACURRICULAR ACTIVITIES

Watonomous · Path Planning Core Member

Jan - Present

- Developed occupancy detection and rerouting logic to enable obstacle avoidance using ROS and lanelet2 libraries
- Integrated occupancy module into the development monorepo using Docker and Docker Compose
- Co-authored research paper on Environment Modeling Techniques for Enhanced Behavioral Planning in Urban Autonomous Driving

PROJECTS

RIJI Bullet Journal Android App · github.com/Nil-Cipher/RIJI · Java, SQL, Room Persistence Library

- Designed and developed a digital bullet journal with multiple data entry methods for quick navigation and better usability
- Enabled **concurrent data retrieval** with an asynchronous search bar by mapping out a schema for one-to-many relationship classes using the Room Persistence Library for auto-generated SQL

TECHNICAL SKILLS

- **Languages:** C, C++, Typescript, Javascript, Scala, Bash, Python, Java, ARM-Assembly
- **Tools:** Google Cloud Platform, GraphQL, Kubernetes, Docker, Node-RED
- **Platforms:** Linux, Android, Windows