Dan Li
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SKILLS

Languages: Python, Typescript, Javascript, C/C++, SQL, Java, Bash
Tools, Databases, Platforms: Git, MongoDB, PostgreSQL, Docker, AWS
Libraries and Frameworks: React.js, NumPy, Flask, Django, FastAPI, PyTorch, Next.js, Express.js

WORK EXPERIENCE

- **Onlia Insurance** — Toronto, ON
  Automation Developer — *May 2023 - Aug 2023*
  - **Regression Testing**: Led the development of a regression testing tool using Selenium with Java, and TestNG.
  - **Test Optimization**: Leveraged Java interfaces to define default implementations for Page Object Models, resulting in a 38% increase in regression test coverage.
  - **Reporting**: Refined Selenium WebDriver exception handling capabilities, resulting in a 15% reduction in the occurrence of incorrect pass-fail reporting instances.
  - **Business-logic Testing**: Configured and executed a back-end project to perform integration tests for policy binding and account activation services.
  - **Data Retrieval**: Developed a SOAP web service to retrieve data for policy binding and activation; utilized the JDBC API with PostgreSQL for program-to-database communication.
  - **File Writing**: Configured Excel writing capabilities with Apache POI to generate spreadsheets of activated accounts for automated testing usage, resulting in a 23% increase in QA resources.

PROJECTS

- **Instagram Marketing and Content Growth Service** | *Typescript, Python, PostgreSQL*
  - Worked in a 2-man team to build a SaaS for content creators to boost their digital presence; architected an Instagram hashtag recommendation API with Django.
  - Implemented RLS and Postgres policies to restrict CRUD operations per user and prevent unauthorized row access.
  - Leveraged the ResNet50 neural network with PyTorch for image feature extraction to refine Instagram hashtag generation per post.
- **Agent-integrated Interview Preparation Tool** | *Typescript, Python, MongoDB*
  - Developed an agent capable of interview simulation and resume evaluation with Cohere and OpenAI's LLMs.
  - Utilized Beautiful Soup to scrape data from the applicant's company of interest; leveraged PDF parsing modules in Python to refine hierarchical information extraction from applicant resume.
  - Used MongoDB vector database to store company and resume data as query and document embeddings; relevancy of resume contexts to company data were determined by the dot product of the respective vectors.
  - Reduced hallucinations by grounding the model on contexts, improving LLM generation to build human trust.
- **Productivity Visualization Tool - Hackfest November 2023** | *Typescript, Python, MongoDB*
  - Architected the UI, REST API, and schema models to build and deploy a cloud-based planning tool with Cohere's LLMs. Won the "Best Use of MongoDB Atlas" and "Best Use of Auth0" awards.
  - Designed MongoDB aggregation pipelines to optimize CRUD operations, achieving over 8.5x faster performance than manual iteration into document data.
  - Leveraged the React Flow library to display sequential data as an interactive node-based flowchart.
  - Developed authentication-required routes with a "redirect" functionality to safeguard user-sensitive data.
- **YouTube Content Analysis Chatbot - Hack The Valley 8** | *Python, MongoDB*
  - Collaborated in a team of 4 to build a Chatbot as a Service with Cohere's LLMs; led development of the REST API to provide the business-logic layer and user management. Won the "Best Use of MongoDB Atlas" award.
  - Integrated the YouTube Data API with string searching algorithms to optimize video context summarization.

EDUCATION

- **University of Waterloo** — Waterloo, ON
  Candidate for Computer Engineering Honours, Co-operative Program — *Sept 2022 – Apr 2028*