

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 REST framework.
 - 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 classification 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 BeautifulSoup 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