Howard Yen

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Technical Skills

Core: Java, TypeScript, JavaScript, Python, React, Node.js, JUnit, Pytest, Jest, Selenium, Playwright, Cypress, REST, SQL, NoSQL, MySQL, MongoDB, Prisma, Sass, SCSS

Exposed: Spring Boot, PostgresDB, AWS, GCP, Docker, Jenkins, Github Actions, Firebase, Next.js, Linux(ubuntu)

Education

University of Toronto   Sep 2019 - Jun 2024
Bachelor of Applied Science, Industrial Engineering, with PEY Co-op
- Coursework: Object-Oriented Programming (Java), Algorithms & Data Structures (Python), Info Systems Design & Analysis, Fund. of Electrical Circuits, Stochastic Operations Research, Intro to AI, Fund. of Machine Learning

BrainStation   Jul 2022 - Mar 2023
Software Engineering (Full-Stack Web Development)

Experience

Full Stack Software Engineer   Sep 2024 - Present
MultiplAI (Stealth Startup)   *Toronto, CA*
- Integrated scalable AWS architecture with SQS, EBS, and multi-threading, enabling seamless scraper and AI parser integration, **achieving over 99% data extraction accuracy** and improved processing efficiency
- Built CI/CD pipeline with GitHub Actions to automate Docker image builds, push to AWS ECR, and deploy to ECS, **reducing deployment time by 4X** and improving release reliability
- **Optimized OpenAI API token usage by 75%** with Python content extraction algorithm using BeautifulSoup, eliminating irrelevant data to enhance model performance and reduce error propagation
- Implemented a contribution activity tracking system using TypeScript, Next.js, and TailwindCSS for a Job Application Tracker, resulting in a **48% increase in user engagement**

Software Developer Intern   May 2022 - May 2023
Nanoleaf   *Toronto, CA*
- **Increased bundle sales by 30%** by architecting a back-end API solution using Ruby, JavaScript, and Shopify APIs to streamline product bundling and resolve warehouse system and Shopify API constraints
- **Achieved a 10X reduction in infrastructure expenses** by developing a full-stack website with React front-end and Node.js back-end on Google Cloud Platform, migrating the WordPress blog to the main domain website
- **Engineered a 45% increase in End-to-End test coverage** by automating testing with Python, Pytest, and Selenium, reducing defect resolution time from 3 days to 8 hours

Software Developer Intern   May 2023 - Sep 2023
Word Up   *Remote*
- **Increased automated test coverage by 3X** through the integration of unit tests into the CI and CD pipeline using TypeScript, Jest, and React Testing Library, significantly enhancing the reliability of the Next.js website
- Engineered and optimized automated tests at the API and UI layers using TypeScript, Selenium, and Cypress, resulting in a **40% reduction in front-end operational failures** and a **25% decrease in post-release issues**

Software IT Specialist Intern   Jun 2020 - Sep 2020
ASML   *Remote*
- Improved operational efficiency by **reducing hardware upgrading procedures from 7 days to less than 24 hours** through optimization using Dynamics 365, Power Automate, and Microsoft Power Platform tools.
- Led a team of 3 cross-functional interns to assist IT service desk engineers in resolving **over 50 hardware and software issues monthly**, ensuring minimal downtime to maintain business continuity

Projects

Seasonal Clothing Classifier Model (Machine Learning) | *Lead Software Engineer*
- Led a team of 4 to develop a PyTorch-based clothing classification model using ANN, CNN, and AlexNet, achieving **over 80% validation accuracy** through transfer learning and addressing dataset limitations
- Researched and implemented 4 CNN architectures, improving test accuracy from 48.08% to 63.12% by applying techniques like dropout and normalization to mitigate overfitting