Brian Lam

Software Engineer

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Education

University of Toronto — *Toronto, Ontario*

Honours Bachelor of Science in Data Mining and Machine Learning — *Sept 2014 - Apr 2020*

Skills

Languages: Python, Java, SQL, C, Shell, HTML/CSS, JavaScript

Frameworks: JUnit, Mockito, Django, Flask, pandas, SQLAlchemy (ORM), unittest, JQuery, Bootstrap

Tools: Git, Jenkins, CircleCI, JIRA, Apache Maven, Apache Ant, Android Studio, SVN, AWS Lambda, AWS EC2, AWS S3, Selenium, Postman, Redis, Celery, Octoparse, Docker, JMeter

Operating Systems: Windows, Linux

Work Experience

TasteGuru — *Toronto, Ontario*

Backend Software Engineer — *Nov 2020 - Jun 2021*

- Implemented changes to Shopify app backend to automate customer billing, allowing the company to scale to many more paying customers
- Improved the overall security of the company's Shopify app by patching exploits, introducing UUID in place of sensitive user information and implementing OAuth to dashboard API endpoints
- Improved the clients' dashboard with proper filtering and other requirements as needed
- Improved deployment process/time of the TrendPrediction platform by containerizing backend, frontend, and data acquisition pipeline tools with Docker
- Improved response time for customers by up to 30% by implementing caching with Redis and NGINX configuration changes

York University — *Toronto, Ontario*

Freelance Software Engineer — *Sep. 2020 - Oct. 2020*

- Reduced time to sort invoices by 90% using Tess4J to perform optical character recognition to automatically identify invoice details previously done manually
- Created a tool to automatically populate values into a spreadsheet using Apache POI and reduced the time to prepare this spreadsheet by over 96%

Temenos — *Mississauga, Ontario*

Software Engineer Intern — *Jun. 2017 - Aug. 2018*

- Created a Python script to identify obsolete nodes from Jenkins to help free up storage space and make it easier to find build jobs
- Resolved defects with the company's Apache Ant build scripts and improved them to increase reliability and developer velocity
- Resolved a major defect in the company's JIRA that caused incorrect search results
- Upgraded outdated HttpClient library of Manulife Security's WealthSuite to modernize the web platform and patch security vulnerabilities
- Implemented the company's new Wiki using HTML5, CSS3 and JavaScript using Microsoft's SharePoint platform

Projects

remove.bg Python API wrapper

Technologies Used: Python

- Developed an easy-to-use Python API wrapper used to remove images from backgrounds programmatically using remove.bg's REST API
- Maintained the GitHub repository (brilam/remove-bg) with over 600+ stars and 150+ forks and responded to inquiries from developers

MapleStory Emulator

Technologies Used: Java, MariaDB

- Developed an emulator of the popular MMORPG game MapleStory using Java
- Implemented server architecture using Netty
- Improved performance on item creation 500% with an XML parser that extract attributes from the game data and places it in a database cache
- Improved performance by having a connection pool to ensure that connections are reused when possible
- Designed a MariaDB database schema to contain players' account information, their characters and other relevant data to characters
- Utilized a disassembler (IDA) to reverse engineer the game's client and server binaries to acquire the game's packet encryption, packet structures and other details to accurately emulate the game