Aditya Patel

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Education

Toronto Metropolitan University (Prev. Ryerson University) Sep. 2021 – Present
Bachelor of Science (Honours), Computer Science (Co-op) *Toronto, Ontario, Canada*

- **Relevant Courses**: Data Structures, Unix, C & C++, Operating Systems, Probability, Statistics, Software Engineering
- **Certifications**: Supervised Machine Learning, by **Stanford Online & DeepLearning** (**Certificate**)

Programming Skills

Languages: Python, C/C++, Java, C#, JavaScript, TypeScript, SQL (Postgres, MySQL), HTML/CSS, Shell Scripting, Rust
Frameworks: React.js, Node.js, Next.js, Django, ASP.NET, Flask, Vue.js, jQuery, Jupyter, Wordpress, TailWind CSS
Tools: Docker, Git, Kubernetes, Apache Airflow, Kafka, Spark, Elasticsearch, GitHub Actions, Linux, Jenkins, NumPy, Postman

Professional Experience

Software Developer Intern May 2023 – April 2024
Royal Bank of Canada - Innovation and Technology *Toronto, Ontario, Canada*

- Engineered a Log Parsing System Infrastructure for CI/CD Pipeline with AWS S3, PostgreSQL, Apache Kafka, Apache Spark, and Python3, optimizing log collection, storage, and analysis for real time actionable deployment pipeline data
- Developed Full Stack Dashboard applications leveraging micro-frontend architecture in React.js and Typescript, utilizing Django backend alongside mathematical computations to provide DevOps insights and improve story completion by 32%
- Created and managed multiple Python DAGs for scheduled data collection, storage and analysis, from distributed systems streamlining Elasticsearch integration through Apache Airflow, yielding 82% efficiency improvements
- Programmed scalable Python API, leveraging GitHub Secret Scanning, to automate scanning, alerting hard-coded passwords in code across enterprise GitHub, eliminating security risks at RBC, with over 80000 vulnerabilities revoked
- Collaborated within an Agile development environment, contributing to deliver high-quality software solutions on time

Trade Floor Software Developer (Web) Intern May 2022 – Sep. 2022
Scotiabank - Global Banking and Markets *Toronto, Ontario, Canada*

- Engineered an advanced JSON to Excel conversion web application for automating secure and efficient Trade Logging, achieving 27% reduced latency than MSFT API, alongside multiple product features like multi-threading computations, varying depth parsing and robust security features making it an integral tool for the capital markets trading team
- Created a File Validation tool using React.js, ASP.NET and C# algorithms, enabling efficient validation of Excel and CSV files with customizable configurations, empowering users to identify and resolve bulk data issues swiftly
- Built a Full Stack Email Communication Archive tool using ASP.NET, C#, jQuery etc, to store and manage Scotiabank's internal communication emails, with search, filter and attachment handling capabilities, accommodating over 100,000 emails and deployed internally across the bank
- Collaborated on a back-end C# API SSH-File-Transfer, throughout SDLC, leveraging SCP and SFTP protocols, facilitating encrypted file transfer between remote UNIX servers and achieving a significant 38% acceleration in processing rates

Software Developer Oct. 2021 – Feb. 2022
TOThrive Startup - Enactus Toronto Metropolitan University *Toronto, Ontario, Canada*

- Conceptualized and architected web applications for an e-commerce start-up incubated by Enactus-TMU DMZ, utilizing Webflow, prototyped web design in Figma and leveraged SQLite3 database
- Effectively articulate technical challenges and solution to facilitate understanding among engineers and stakeholders

Projects

DeskGenius (**deskgenius.vercel.app**) | *Next.js, React.js, Three.js, Tailwind CSS, JavaScript* May 2023

- Front-end 3D Rendering Engine, using Next.js and Three-Fiber, for visualizing table arrangements before purchasing
- Utilizes graphic ray tracing, texture mapping and advanced algorithms to optimize rendering performance & reduce computational overhead, resulting in a highly responsive and immersive user experience, all at no product cost

PetroForecast (**GitHub**) | *Python, React.js, Docker, SQLite3, FastAPI, Jupyter Notebook* May 2023

- Full Stack Machine Learning Application to predict and analyze US heating oil futures
- Utilizes Prophet library for time-series regression and containerised using docker-compose for easy installation

SchedulingSignals (**GitHub**) | *C, Bash Scripting* Jan. 2023

- Project focused on multiprocessing with Round Robin (RR) and Lucky 7 (L7) algorithms for inter-process communication via. signals in C and Bash Scripts, having master-worker cluster architecture
- Minimized latency and optimized data synchronization through algorithms, facilitating seamless inter-process coordination.