

Aditya Patel

6478923968 | adityakdpatel@gmail.com | linkedin.com/in/thisisadityapatel | github.com/thisisadityapatel | Toronto, ON
aditya-patel.com

EDUCATION

Toronto Metropolitan University (Prev. Ryerson University)

Sep. 2021 – Present

Bachelor of Science (Honours), Computer Science (Co-op)

Toronto, Ontario, Canada

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

PROGRAMMING SKILLS

Languages: C/C++, Python, Java, C#, JavaScript, TypeScript, SQL, HTML/CSS, Shell Scripting, Rust, GraphQL, UNIX

Frameworks: React.js, Node.js, Next.js, Django, LangChain, ASP.NET, Flask, Vue.js, jQuery, Jupyter, Wordpress, Tailwind CSS

Tools: Docker, Git, Kubernetes, Pandas, AWS, Jira, Linux, Airflow, Kafka, Spark, GitHub, NumPy, Prompt Engineering

PROFESSIONAL EXPERIENCE

Software Engineer Intern

May 2023 – April 2024

Royal Bank of Canada - Innovation and Technology

Toronto, Ontario, Canada

- Super-headed development of RBC's in-house VS Code autopilot extension, powered with Falcon-40B and Mistral Instruct-7B LLMs hosted internally, employing LangChain FastAPI back-end microservices and JavaScript VS-Code Webview GUI, alongside vector database, to empower software development with LLM-driven IDE automation
- Developed 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
- Engineered Full Stack Dashboard applications leveraging micro-frontend architecture in React.js and Typescript, utilizing Django backend alongside algorithmic 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
- 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 scalable 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# REST API SSH-File-Transfer, following SDLC, leveraging SCP and SFTP protocols, facilitating encrypted file transfer between remote UNIX servers, 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*

June 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 & less computational overhead, resulting in a highly responsive UI and immersive user experience, uploaded to open source

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 and testing

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.