Mayank **Mehra**

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Education

University of Waterloo | Bachelor of Computer Science (Co-op) BCS *Waterloo, ON, Canada*
Sept. 2021 - Apr. 2026 | Cumulative Average: 88%
Relevant Courses: Object-Oriented Software Development, Data Structures & Algorithms, Operating Systems, Database Management

Experience

Full Stack & Data Engineering Intern | RBC - Investor Services | Toronto, ON *Aug. 2023 - Apr. 2024*

- Spearheaded the planning, development, and deployment of a new admin permissioning and workbench portal for clients on RBC One to manage access to portfolio and investment data used by over 2000+ clients built in Angular.
- Implemented and maintained RESTful APIs exposed to users and the admin portal performing business logic, CRUD operations, pagination, and search functionalities using NestJS, TypeORM, and Typescript.
- Created comprehensive test suites encompassing functional, unit, integration, and penetration testing for both API endpoints and frontend, employing Jest, Cypress, and Postman to achieve 95% test coverage.
- Developed DAGs using Apache Airflow to model and visualize flexible and parameter-driven ETL workflows that perform data quality checks, transformations, cleaning, and ingestion leveraging PySpark.
- Designed MSSQL scripts to migrate data and implement audibility using Temporal Tables.
- Developed a data seeder for local development to streamline database setup and testing processes.

Software Engineering Intern | Radish | Montreal, QC *Jan. 2023 - May 2023*

- Developed and deployed a serverless CV and OCR app on Azure to automate ID validation with high accuracy using Python, Expressjs, OpenCV, Pytesseract, and Azure Functions.
- Created microservices with Express.js, Node.js, and Azure to effectively manage various requests like Wix webhooks.
- Implemented CI/CD pipelines using Docker and GitHub Actions to streamline the deployment of projects to Azure.
- Spearheaded new iOS app project built using SwiftUI and a clean architecture to facilitate order operations for 15+ delivery drivers through a reactive data flow increasing driver efficiency by 35%.
- Utilized Combine, MapKit, SocketIO, and CoreLocation to create features like real-time navigation and order tracking.
- Designed and published a document scanner iOS framework using AVFoundation, Vision, and SwiftUI enabling automatic detection, scanning, and cropping of documents with high accuracy.

Full Stack & Mobile Developer Intern | UGO - TD Bank | Toronto, ON *May 2022 - Aug. 2022*

- Designed a property search iOS application using Swift (UIKit), REST APIs, and MapKit. Implemented pagination, location-based property searching, and rendering dynamic map data features.
- Implemented a responsive order flow for a Cineplex Gift Card Portal, using Angular and leveraged CRUD operations to verify, create, and retrieve product or client data.
- Redesigned Angular sales portals for 5000+ active customers, adding mobile responsiveness and accessibility.
- Built a Jenkins pipeline using Python and Fastlane to capture UI screenshots for iOS apps during builds, saving 5-8 weekly hours for QA. Presented feature to the infrastructure team for future CI/CD pipeline enhancements.

Skills

Languages	Python, TypeScript, Javascript, Swift, C++, C, Go, SQL, HTML/CSS, Java, Dart
Technologies/Frameworks	Nextjs, Angular, SwiftUI, UIKit, NestJs, Express, Nodejs, Flutter, Azure, AirFlow, PySpark, Pandas, OpenCV, NumPy
Tools	Git, Docker, Bash, Jenkins, Postman, Cypress, Jest, Swagger, Jira, Confluence, Figma, Blender

Projects

ScribeMe | GPT-3.5 Sentiment Analysis Web App

- Implemented a sentiment analysis journaling app using NextJS, Prisma, Langchain, and OpenAI GPT APIs allowing users to track, question, and understand their journal entries over time.

UniFinder | Mobile App Development | Hack The North

- Developed an app using Flutter and Firbase Rest API that allows students applying to university to stay up to date in regards to news, programs, and application schedules for all universities on one platform

Chess | C++ Design Development Project

- Designed a Chess game in C++ using text-based and graphical input, applying OOP practices and design patterns such as the Observer, Strategy, MVC, and Chain of Responsibility.

NFTMint | Web3 Flutter App | Proof of Concept

- Created a Minting app allowing users to create their own NFTs while abstracting setup. Deployed ERC-721 smart contracts using Ethers, Hardhat, and Solidity onto Polygon Testnet.
- Leveraged Express to create a microservice handling account generation and minting processes.

Extracurriculars

Project Manager - CS Class Profile | CS Club Waterloo | Waterloo, ON *Apr. 2022 - Present*

- Scoped the design and development of the yearly CS Class Profile website built using NextJS .
- Created Python scripts to consolidate, clean, and interpret form data for 2022 and 2023 graduating class profile.

Sponsorship Coordinator | TOHacks *Aug. 2021 - Sept. 2023*

- Networked with industry professionals to maintain and generate connections with sponsors and speakers.