

Arup Ukil . Jarvis Consulting

I'm a graduate of the University of Toronto, holding a Bachelor of Science degree in Computer Science and Mathematics. I'm a full-stack developer with practical experience from my one-year internship at SS&C Technologies, volunteer work in a small team with the charity United for Literacy, and personal projects. Most of my work and personal projects have used React/React Native for the frontend and backend frameworks such as Next.js, Spring Boot, or Django. C++ is my favourite language, and I have used it since high school for competitive programming and course projects (including a lightweight networking stack and basic computer graphics with OpenGL). I bring substantial hands-on software development experience from my undergraduate studies and early roles, and I'm looking to leverage it in an early-career software engineering position.

Skills

Proficient: React/React Native, Node.js/Next.js, HTML/CSS, TypeScript/JavaScript, C++, Java, Spring Boot, Linux/Bash, PostgreSQL/SQL, Agile/Scrum, Git, REST APIs, Maven

Competent: Python, C, AWS, Docker, WSL, Postman

Familiar: Machine Learning, Python ML Libraries (NumPy, TensorFlow, PyTorch, Scikit-learn, Gensim), Flask, Django, Figma, Jenkins, Jira

Jarvis Projects

Project source code: https://github.com/jarviscanada/jarvis_data_eng_ArupUkil

Cluster Monitor [GitHub]: Developed a Linux cluster monitoring agent that collects server hardware information once and then collects resource-usage metrics at fixed intervals (e.g., every minute). Tested on Rocky Linux 9 (and expected to work on similar distributions). Data is collected via Bash scripts that run standard Linux commands and is persisted in a PostgreSQL database running in a Docker container.

Grep App [GitHub]: Built a simplified clone of the Linux **grep** command that searches for regex matches across a user-provided file or directory and writes matching lines to an output file. Implemented using Core Java, Lambda/Stream APIs, SLF4J logging, and JUnit tests. Developed with Maven/IntelliJ, with deployment support via Docker for containerisation.

Stock Quote App [GitHub]: Developed a CLI Java stock trading platform that fetches real-time market data via the Alpha Vantage API and supports buying/selling positions persisted in a PostgreSQL database. Used JDBC for database access, OkHttp for HTTP requests/responses, and JUnit/Mockito/Testcontainers for testing. Emphasised clean architecture (e.g., DAO pattern and REST APIs) and used Jackson Mixins to avoid coupling the application to Alpha Vantage's response schema.

Spring Boot Trading App [GitHub]: Built a Spring Boot trading system for managing traders/accounts, caching Finnhub market quotes in PostgreSQL, and submitting market orders via RESTful CRUD endpoints. Uses a layered (Controller → Service → DAO) architecture with Java 8, Spring Boot, JPA/Hibernate, and Apache HttpClient. Unit tests use Apache DBCP to provision temporary H2 DataSources, and Swagger UI is included for manual API testing.

Highlighted Projects

Scriptorium [GitHub]: Created and deployed a social web app on AWS (ECS, ECR, RDS) for writing, sharing, and discussing code in multiple programming languages using Next.js, React, TypeScript, and Tailwind CSS. Implemented a Prisma database schema managed via RESTful APIs with JWT-based authentication. Executed user code in isolated Docker containers to maintain security and enforce resource limits.

United for Literacy Volunteer Mobile App: Worked in a team of six for a University of Toronto partner charity, United for Literacy, to build an app that streamlines the volunteer lifecycle (application and onboarding through to offboarding). Built an in-app quiz in React Native to verify volunteer understanding of volunteering policies. Helped implement group chat by integrating the Django backend API with the frontend, including role-based behaviour for different user types.

Professional Experiences

Software Developer, Jarvis (2025-present): Developed technical and behavioural skills by delivering multiple projects using new tools for each. Built projects including a Linux Cluster Monitoring Agent (Bash, PostgreSQL, Docker), a Java

Grep App, and a Spring Boot Trading App. Worked in a Scrum-based process with planning, daily stand-ups, and retrospectives.

Software QA Engineer, SS&C Technologies (Sept. 2023 - Aug. 2024): Used React and Java Spring Boot to develop a test case queue manager that automates management of test runs on remote machines. Built a website navigation tool using Playwright that generates an HTML page combining a BackstopJS report with an SS&C internal files comparison report. Assisted with an Excel VBA macro to generate Progress 4GL queries for non-technical users. Migrated legacy performance scripts from LoadRunner to JMeter to reduce costs.

Research Assistant, iSE Labs (May 2022 - Aug. 2022): Developed a Python/Flask-based reverse engineering comprehension tool that parses source-code call graphs into root-to-leaf execution paths and applies agglomerative clustering to produce a hierarchical tree representation. Enhanced semantic labelling of cluster nodes using Gensim topic models (Word2Vec/Doc2Vec similarity) and TextRank for more accurate function-name-based annotations. Developed an interactive GoJS frontend to visualise comparisons of execution-path trees across software systems.

Education

University of Toronto (2020-2025), Honours Bachelor of Science, Computer Science and Mathematics

Miscellaneous

- Care Worker, Su-Rekha Care Centre (Night Shift): maintained cleanliness and safety of the care home, assisted residents as needed, and prepared supplies and common areas for the next day.
- Assistant Volunteer, Kumon: guided children from preschool to Grade 12 to understand and solve Kumon math and reading work