

Arup Ukil . Jarvis Consulting

Hi, I'm a new graduate from the University of Toronto with a Bachelor of Science in Computer Science and Mathematics. I'm a full-stack developer who gained practical experience throughout my undergrad. Examples include my one-year internship at the fintech company SS&C Technologies where I worked independently on multiple projects such as a React and Java Spring Boot-based test case queue manager. Another being collaboration work in a six-person software design project for the charity United for Literacy, where we built a volunteer's lifecycle app using React Native and Django. Beyond work, I've built software such as Scriptorium, a Next.js/TypeScript social platform for writing, sharing, and discussing code across programming languages, which was deployed on AWS with JWT authentication and Docker-based code execution sandboxes. Despite my experiences aligning with more React and Java work, my personal favourite language to use is C++ which I've been using since high school to solve competitive programming problems. I don't have professional experience with C++ yet but at some point, I do wish to have a job using it. Overall, I bring substantial hands-on experience in software development through my undergrad that I hope to leverage to succeed in my early career.

Skills

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

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 helps collect information from Linux servers in a cluster. It collects the server hardware information once and then in set intervals (such as every minute) collects the server's resource usage. Tested on Rocky Linux 9 though it may work on other distros. The data is collected by executing bash scripts that run Linux commands and then saving the data in a PostgreSQL database that's run on a Docker container.

Highlighted Projects

Scriptorium [GitHub]: Created and deployed a social web app through AWS ECS, ECR, and RDS where you can write, share, and discuss about code in multiple programming languages using Next.js, React, TypeScript, and Tailwind CSS. Implemented a Prisma database schema which were managed and interacted via RESTful APIs with account authentication (JWT) in the backend infrastructure. Executed user code in isolated containers using Docker to maintain security and enforce limits on computer resource usage.

United for Literacy Volunteer Mobile App: Worked with a team of six for a University of Toronto's partner charity, United for Literacy, to build an app that streamlines the volunteer lifecycle - from the application and onboarding process, through tools that support daily activities, to the final offboarding stage. Used React Native to create an in-app quiz that confirms that the volunteers understand United for Literacy's volunteering policy. Worked with a teammate to set up the group chat functionality - specifically connected the Django backend API with the frontend such that different types of users can be differentiated.

Professional Experiences

Software Developer, Jarvis (2025-present): Trained my technical and behavioural skills through developing multiple software projects using new tools for each. Created projects such as a Linux Clustering Agent (Bash, PostgreSQL, and Docker). Developed projects using a Scrum system by having planning meetings, daily stand-ups, and retrospectives through project development.

Software QA Engineer, SS&C Technologies (Sept. 2023 - Aug. 2024): Used React and Java Spring Boot to develop a new test case queue manager that automates the management of test runs on remote machines, improving efficiency by eliminating the need for manual setup and result checking by users. Using the Playwright TypeScript library, created a website navigation tool which creates a BackstopJS report and a file comparison report on the downloaded files using a tool from the company. Utilizing JavaScript, those reports alongside their respective website navigation

path information were then combined into a larger HTML report that contains all the information for each scenario and viewport in the BackstopJS report. Assisted in developing an ExcelVBA macro that allows users to generate Progress 4GL queries without knowledge of Progress. Migrated and updated legacy scripts from LoadRunner to JMeter to eliminate financial expenses in performance testing.

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 labeling of cluster nodes using Gensim topic models, introducing Word2Vec/Doc2Vec similarity measures, and TextRank for more accurate function name based annotations. Developed an interactive GoJS frontend to visualize comparisons of execution path trees across different software systems.

Education

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

Miscellaneous

- Kumon Teaching Assistant Volunteer: guided children from preschool to 12th grade to understand and solve their Kumon math and reading work