

Adwait Kulkarni

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EDUCATION

University of British Columbia

Vancouver, BC

Bachelor of Science in Computer Science, Minor in Data Science — GPA: 3.8/4.0

September 2020 – April 2025

- Developer in UBC Subbots, GDSC, UBC Data Science clubs. Participant of Google's invite-only Software Product Sprint.

EXPERIENCE

Full-Stack Developer Intern

April 2023 – August 2023

Royal Bank of Canada (RBC)

Toronto, ON

- Designed and delivered Java Spring microservices and RESTful APIs to extract mainframe data, stream it via Kafka, and cache with Redis, cutting data recovery time by 25% for downstream services.
- Accomplished to reduce monitoring time of 20+ services for 50+ applications by ideating and building a Kafka solution.
- Took ownership of features in RBC's open-source projects, delivering 10+ enhancements and resolving 20+ bugs using Java and full-stack web tools; authored technical docs that drove a 50% increase in adoption.
- Led onboarding by creating dev setup guides and mentoring 2 hires, accelerating ramp-up, and reducing onboarding time.
- Selected as 'Top Talent' among 1,400 interns and invited to discuss the future of banking with Payments EVP and Director.

Full-Stack Developer Intern

August 2022 – April 2023

Royal Bank of Canada (RBC)

Toronto, ON

- Initiated and deployed a Spring Web and Thymeleaf-based secrets retrieval tool, achieved reduction of credential setup time from 10+ minutes to under 2 minutes per dev, boosting productivity for 200+ developers.
- Secured and scaled secrets management across 20+ applications by integrating Hashicorp Vault's API, safeguarding over 10,000 service accounts.
- Administered and oversaw application maintenance by updating Maven dependencies, transitioning secrets from YAML environments to cloud, and releasing patches for outdated libraries - reduced overall JIRA team tech debt by 40%.
- Authored migration guides for OpenShift and Cloud Foundry, and independently migrated 10+ apps across cloud platforms.

PROJECTS

Distributed Key-Value Store with Raft | Go, Raft

January 2025 – April 2025

- Engineered a fault-tolerant, distributed key-value store with Go and Raft consensus, as outlined in Stanford's ATC 2014 paper, ensuring strong data consistency and persistent logs, with a 99% uptime.
- Modified Raft algorithm, adding heartbeats every 250ms, leading to election completion in 500ms, a 40% improvement.
- Achieved replicated logging via RPCs and implemented an adaptive retry mechanism to eliminate redundant calls.
- Designed recovery with snapshots and log pruning to reduce disaster recovery time from 750ms to 300ms.

TL;DRReviews | React.js, AWS Lambda, SageMaker, RDS, S3, Hugging Face, Docker

August 2024 – December 2024

- Created an AWS pipeline to analyze 6000+ UBC CPSC course reviews, generating real-time insights through a dashboard.
- Built a summarization model with Google's PEGASUS XSUM on SageMaker, automated batch processing for scalability.
- Implemented security with VPCs, IAM roles, Security Groups, and KMS—complying with CIS, CISA, and NIST standards.
- Developed dynamically updating visualizations with D3.js, showing sentiment, word clouds, and confidence scores.
- Cut AWS expenses by \$20/month by replacing EC2 VM solutions with Lambda auto-scaling for SageMaker endpoints.
- Wrote a 6-page IEEE formatted paper and gave a 20-minute end-of-term presentation to students and professors.

MovieHub | React.js, Node.js, Material-UI, Express.js, MongoDB, TMDB API, Docker

April 2024 – September 2024

- Led a team of 4 to build a platform to rate, review, and share movies, owning both backend architecture and frontend UX.
- Implemented bcrypt hashing and JWT encryption with session handling and token expiry, reducing unauthorized access.
- Automated CI/CD and testing with GitHub Actions, Vitest, and Postman, and packaged to prod with Docker Images.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, Go, HTML/CSS, R, C/C++

Frameworks/Libraries: Spring, React.js, Node.js, Express.js, D3.js, pandas, Scikit-Learn, Material-UI, Altair, JUnit, Vitest

Tools/Technologies: Apache Kafka, Redux, Git, GitHub Actions, Docker, SageMaker, AWS, OpenShift, Cloud Foundry

Databases: MongoDB, MySQL, RDS, Redis, H2, Elasticsearch