Adwait Kulkarni

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EDUCATION

University of British Columbia   Vancouver, BC
BS in Computer Science and Minor in Data Science — GPA: 3.8/4.0   *September 2020 – April 2025*
- Developer in UBC Subbots and 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.
- Ideated and built a Kafka app to reduce metadata monitoring time of 20+ topics for over 50 deployed applications.
- 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 guides and mentoring 2 hires, accelerating ramp-up, and reducing onboarding time.
- Chosen as 'Top Talent' among 1,400 interns and invited to share insights with Payments EVP and Director.

Full-Stack Developer Intern   August 2022 – April 2023
Royal Bank of Canada (RBC)   *Toronto, ON*
- Built and deployed a Spring Web and Thymeleaf-based secrets retrieval tool, cutting credential setup time from 10+ minutes to under 2 minutes per dev, boosting productivity for 200+ developers.
- Fortified secrets' storage for 20+ apps with Hashicorp Vault's API, covering 10,000+ profiles and 50,000+ records.
- Administered and oversaw application maintenance by updating Maven dependencies, transitioning secrets from YAML environments to cloud, and releasing patches for outdated libraries - reduced overall tech debt by 40%.
- Authored cloud migration guides for RedHat OpenShift and Cloud Foundry, and independently migrated 10+ apps.

PROJECTS

Distributed Key-Value Store with Raft | *Go, Raft*   January 2025 – April 2025
- Developed a fault-tolerant distributed key-value store from scratch using the Raft consensus algorithm from Stanford's ATC 2014 paper in Go, achieving strong consistency and creating persistent logs.
- Improved Raft election stability with randomized timeouts and heartbeats to reduce split votes.
- Built replicated logging via RPCs and implemented adaptive retries to eliminate redundant calls.
- Designed recovery with snapshots and log pruning to reduce recovery time from 750ms to 300ms.

TL;DReviews | *React.js, AWS Lambda, SageMaker, RDS, S3, Docker*   August 2024 – December 2024
- Designed an AWS pipeline to analyze 6000+ UBC course reviews, generating real-time insights with a dashboard.
- Built a summarization model with Google's PEGASUS on SageMaker, automated batch processing for scalability.
- Implemented VPCs, IAM roles, Security Groups, and KMS encryption—complying with CIS, CISA, and NIST rules.
- Developed visualizations with D3.js, showing sentiment, word clouds, and confidence scores for insights.
- Cut AWS expenses by $20/month by replacing EC2 solutions with Lambda auto-scaling for SageMaker endpoints.

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 backend architecture and frontend UX.
- Implemented JWT-based encryption with session handling and token expiry, reducing unauthorized access.
- Automated CI/CD and testing with GitHub Actions, Vitest, and Postman, and deployed to production with Docker.

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