ADWAIT KULKARNI

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EDUCATION

University of British Columbia   Vancouver, BC
B.Sc. in Computer Science, Minor in Data Science | GPA: 3.8/4.0   *September 2020 – April 2025*
- Developer in UBC Subbots, GDSC UBC, and Data Science clubs. Selected for Google's invite-only Software Product Sprint.

EXPERIENCE

Full-Stack Developer Intern   April 2023 – August 2023
Royal Bank of Canada (RBC)   *Toronto, ON*
- Architected and delivered Java Spring Boot microservices and REST APIs with Kafka pipelines, cutting data recovery times by 25%.
- Accomplished to enable real-time metadata monitoring of 20+ services for 50+ applications by ideating a Kafka-based solution.
- Owned and shipped 10+ enhancements and bug fixes in RBC's open-source projects using Java and full-stack web tools.
- Led onboarding by creating developer environment setup guides and mentoring 2 hires, reducing ramp-up time by 75%.
- Selected as 'Top Talent' among 1,400 interns and invited to leadership round-tables with EVP of Payments and Retail.

Full-Stack Developer Intern   August 2022 – April 2023
Royal Bank of Canada (RBC)   *Toronto, ON*
- Built a Spring + Thymeleaf secrets tool to cut setup time from 10+ minutes to under 2, boosting productivity for 200 developers.
- Secured credential management for 20+ applications by integrating Hashicorp Vault's API for over 10,000 service accounts.
- Spearheaded tech debt reduction (40%) by updating Maven dependencies, migrating secrets to the cloud, and patching legacy libraries.
- Independently migrated 15+ services across RedHat OpenShift and Pivotal Cloud Foundry PaaS platforms.

PROJECTS

ClusterVAN | *Python, FastAPI, Scikit-Learn, pandas, Plotly Dash, Groq LLM, FPDF*   January 2025 – May 2025
- Developed a geospatial platform to pinpoint Vancouver's underserved areas by K-Means clustering 300K+ businesses over 6 years.
- Integrated Groq LLM to generate 5+ custom recommendations to open new businesses based on nearby competitors.
- Generated an interactive Plotly dashboard with clusters and legend drilldowns, enhancing usability for future businesses.
- Structured a scalable FastAPI backend and added individual business on-click PDF generation of AI-sourced insights.

Distributed Key-Value Store with Raft | *Go, RPC, Raft*   January 2025 – April 2025
- Engineered a fault-tolerant, distributed key-value store with Go and Raft consensus based on Stanford ATC 2014.
- Improved leader election with heartbeats every 250ms to reduce split votes, achieved leader election completion in under 500ms.
- Achieved replicated logging via RPCs and recovery with snapshotting and log pruning to reduce recovery times from 750ms to 300ms.

TL;DReviews | *React.js, Lambda, SageMaker, RDS, S3, Hugging Face, Docker*   August 2024 – December 2024
- Created an AWS pipeline to analyze 6000+ university course reviews, generating real-time insights through a dashboard.
- Launched a summarization model with Google PEGASUS XSUM on AWS SageMaker and automated batch processing for review clusters.
- Implemented AWS security with VPCs, IAM roles, Security Groups, and KMS—complying with CIS, CISA, and NIST standards.
- Shipped dynamic visualizations used by 50+ users with D3.js for sentiment scores, frequent keywords, and confidence scoring.

MovieHub | *React.js, Node.js, Material-UI, Express.js, MongoDB, Docker*   April 2024 – September 2024
- Led a team of 4 to build a movie recommender system by integrating TMDB API with a React.js frontend and Node.js backend.
- Programmed MongoDB-backed REST routes to persist user preferences and watchlists and enabled live updates via Redux global state.
- Executed authentication using bcrypt end-to-end hashing and JWT encryption with session handling and token lease expiry.
- Automated CI/CD and testing with GitHub Actions, Vitest, and Postman, and packaged with Docker Images.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, Go, HTML/CSS, R, C/C++
Frameworks/Libraries: Spring Boot, React.js, Node.js, Express.js, D3.js, pandas, Scikit-Learn, Altair, JUnit, Vitest
Tools/Technologies: Apache Kafka, Git, Thymeleaf, Docker, AWS (SageMaker, S3, Lambda, RDS), OpenShift, Cloud Foundry
Databases: MongoDB, MySQL, Redis, H2, Elasticsearch