Derick Yang

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Strava   San Francisco, CA
Senior Software Engineer II - Geo/Core Services Platform   *January 2023 - Present*
- Built a scalable, reusable key-value cache for immutable batch Spark outputs, optimizing data retrieval
- Developed vector tile-based weekly and night heatmaps with regular update intervals on Spark and Airflow
- Optimized data pipelines and service resourcing, reducing costs by $500k annually
- Developed CloudFront authentication for secure map tile access, improving security and reducing unauthorized usage
- Established an engineering-wide technical investment framework, aligning engineering initiatives with business goals
- Spearheaded migration of batch jobs from Mesos to Kubernetes, improving scalability and developer efficiency

Senior Software Engineer - Metro Server/Geo Server   *September 2021 - December 2022*
- Designed and implemented S3-based cache system storing street traversal data for partner-facing visualizations
- Automate data pipeline for batch Metro backfills and OpenStreetMap basemap builds with Airflow, K8s, and Spark
- Build and implement Origins and Destinations and Travel Times products using Thrift, MySQL
- Drive and implement product initiative to incorporate real-time updating bikeshare stations into vector tile map layer

Wealthfront   Palo Alto, CA
Senior Software Engineer - Data Engineering   *July 2020 - September 2021*
- Led Wealthfront's transition to Terraform, automating serverless AWS infrastructure management
- Architected real-time classification pipelines using AWS Lambda, ECS Fargate, and Kafka
- Designed and built logging for PCI-compliant card infrastructure with Kinesis, Beats, and ELK stack
- Developed and designed data flow to scale data ingestion into Redshift data warehouse

Software Engineer - Data Engineering   *June 2018 - June 2020*
- Implemented monitoring and asynchronous job reporting for Airflow with CloudWatch and Lambda
- Developed Spark data pipelines for computations in Path financial planning product
- Mentored engineers on data and backend engineering teams on Spark and AWS

The MathWorks   Natick, MA
Software Engineering Intern   *May 2017 - August 2017*

Embark Corporation   New York, NY
Software Engineering Intern   *May 2016 - August 2016*
- Worked on small team (4 eng) on Angular web app, test suites, and adaptive scoring algorithm for students

Tufts University   Medford, MA
Research Assistant   *September 2015 - May 2016*

Projects, Presentations, and Writings

Rain	Blog post on immutable batch key-value store cache	*2025*
OpenStreetMap	Presentation at SotM conference on generated edges from the Strava heatmap	*2024*
Privacy in Metroview	Blog post on efficiently meeting privacy standards in Metroview	*2022*
Scaling aligned edges	Blog post on efficient serving of large batch datasets	*2022*
Tufts Menus & API	Alexa skill to retrieve menus using AWS Lambda and REST web scraping API	*2018*
Web Coder	Web app for real-time collaborative coding built with Go, Node.js, and Mongo	*2017*
Mongoose	Fixed document saving with timestamps in ODM library	*2016*

Skills

Code	Scala, Java, Python, JavaScript, Bash
DB	MySQL, Snowflake, Redis, MongoDB, Postgres, Redshift
Tech	AWS, Spark, Kubernetes, Thrift, Kafka, Terraform, Git, Airflow, Docker, ELK, Maven, sbt, NodeJS, OSM
Language	Mandarin Chinese (fluent: speaking, proficient: reading, writing)

Education

Tufts University, Medford, MA - *BS, Computer Science and Mathematics*   *May 2018*
GPA: 3.88 (overall), 3.98 (major)   Dean's list (all semesters), *summa cum laude*