

Peter D'Elia

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Profile

I am a product-minded software engineer with years of experience in production systems for high-growth SaaS startups, including multi-tenant enterprise software. I am motivated by the challenge of solving hard engineering problems and simplifying complex systems. I also built Dendro, an open source system monitoring framework built using AWS services, and intended to be used by small, distributed applications.

Experience

Senior Fullstack Cloud Engineer, *Thread*

2023 – present

- Infrastructure and observability: Tuned retry logic to increase deployment resilience; Improved observability of core API services through improved logging and metrics collection. These changes decreased the amount of time spent debugging.
- API development and eventing: Built new endpoints; modified existing endpoints; co-designed and implemented real-time protobuf events, shipped through Kafka, to be consumed by auxiliary services.
- Developer velocity and experience: Integrated strict go linter and formatter to enforce stylistic consistency and reduce time spent bikeshedding; wrote tools to decrease time spent on repetitive developer activities.
- Major technologies used: Go, Kafka, Protobuf, Docker, Hashicorp Nomad, Grafana, sqlc, sql-migrate

Software Engineer, *Apartment List*

2021 – 2022

- Worked on Typescript/React frontend, Ruby/Rails backend, Python/Airflow and Protobuf ETL/data pipeline in core business product area
- Led a team to develop code-generation tool automating Protobuf message creation for our real-time event pipeline
- Led the frontend migration from Mapbox to Google Maps, designed and implemented abstraction layer between vendor and custom map code.
- Designed and implemented performance improvement in Google BigQuery/Airflow/3rd party API data pipeline that resulted in 7x performance increase in data throughput
- Led initiative to develop high-level documentation for how Apartment List's service architecture enables its business model

Co-Creator, Software Engineer, *Dendro*

2021

- Created Dendro, (getdendro.com ) an open-source, serverless monitoring framework for small, distributed applications.
- Designed, prototyped, and built Dendro using Node.js and AWS services (IAM, Kinesis Firehose, Lambda, Timestream, SNS, S3, CloudWatch).
- Automated AWS infrastructure deployment and teardown (TypeScript, AWS SDK)
- Authored technical case study (getdendro.com/case-study) describing the difficulty of monitoring distributed systems, how Dendro was designed and built to solve this problem, and engineering challenges.

- Designed and implemented async exponential backoff code as a solution to AWS's optimistic response object, making pipeline deployment more responsive and resilient.

Fullstack Developer, Self-employed

2018 – 2021

- Jello: A kanban board app built with MongoDB, ExpressJS, and React/Redux.
- RequestBean: A request bin app built with Ruby on Rails and Postgres.
- Airlines App: A flight routes application built using ExpressJS and ReactJS.

Skills

Languages (JavaScript, Ruby, Golang, TypeScript, Python, SQL)

Frameworks (Airflow, ReactJS, Rails, Redux, ExpressJS, Flask)

Misc. Skills (Git, Github, Linux, RESTful APIs, HTTP, OOP, PostgreSQL, MongoDB)

Cloud Technologies (AWS: Kinesis, IAM, Lambda, S3, Cloudwatch, Timestream, SNS, DigitalOcean Droplet, Heroku, GCP, Google BigQuery)

Education

University of Virginia, Ph.D.

2016

Doctorate in music history, dissertation on Beethoven's music in its context.

Harvard University, B.A.

2007

Bachelor of music. Piano performance, history, theory, composition.