



# Patrick J. Auld

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I am a product-minded engineer with nearly two decades of experience developing SaaS products and platforms. I've worked as engineer #2 at startups and led multiple teams at Fortune 500 companies. My roles have ranged from pure coding to engineering manager to leadership positions overseeing 60+ ICs. I love to invest in engineering culture and dance with Conway's Law. Writing is the core of understanding. I keep a [Substack](#) for my thoughts as well as a [personal README](#).

## Buzzwords!

Java/JVM, Python, Cloud Architecture, AWS, Modular Monoliths, Microservices, Serverless, Kubernetes, Service Mesh, CI/CD, API Design, Database Design, gRPC, RFC, REST, Developer Productivity, Mentoring, Culture

## Sabbatical

Oct 2023 - Jan 2024

- I rebuilt the garden and a few side projects.

## Flexport

July 2021 – Oct 2023

### Staff Software Engineer

- I developed a system for managing the digitization of logistics documents at configurable granularities to optimize cost and required accuracy. The system ranges from dirt-cheap OCR to Human-in-the-Loop AI services, resulting in a dozen new supported document types that were previously not cost-effective.
- With a small team, I designed and built a system to model Flexport's logistics network as a graph. The graph allowed automated, cost-aware (re)routing, shipment optimization, and journey-agnostic quoting. Tests showed substantial cost savings; final numbers were not available at the time of my departure.

- To handle aggressive hiring, I and a group of cross-discipline representatives redesigned the Flexport Tech interview practices and onboarding curriculum. I wrote new interview questions and updated our feedback to focus on core tenets. Several hundred individuals who accepted offers went through the onboarding, which received reasonably good feedback. (It was still too long.)

## Autodesk

Dec 2018 – July 2021

### Software Architect

- I was responsible for web, mobile, backend platforms, development workflows, AWS Infrastructure, and quality tooling. Eight teams of ~60 developers total reported to my group.
- I and the teams I directed are responsible for the strategy and execution of integrating PlanGrid into Autodesk ecosystems.
- I developed company-wide guidelines for all Autodesk SaaS products as an Autodesk's Production Readiness Program steering committee member.
- To encourage broader thinking and empathy with the teams we served, I created an employee rotation program for ICs to try new positions temporarily.

## PlanGrid

June 2017 – Dec 2018

*Autodesk purchased PlanGrid in December of 2018*

### Engineering Manager

*This position spans PlanGrid and Autodesk.*

- I worked with internal teams to find problems that crossed their team boundaries or impacted large parts of the engineering organization.
- The team developed distributed tracing tools, implemented a service mesh using Istio, rebuilt auth to enable an easier transition to microservices, and owned shared services.
- To enhance developers' abilities of available tools, I organized a recurring event that invited PlanGrid's vendors onsite for training and development.
- I also had the pleasure of being the first to document PlanGrid's PIP process.
- In a fun twist, just weeks before starting this position, I told my manager I never wanted to be in management. It ended up being a great experience.

### System Architect

- This was a fun time. We doubled in size twice in ~ 18 months.
- To maintain sanity during hyper-growth, I reworked internal systems, processes, our tech stack, and culture.
- I led our migration from Heroku to Kubernetes on AWS.
- As part of our scaling, I directly worked with teams to design processes and

create technology to break our monolith apart.

## Birst

Jul 2013 – Jun 2017

### Lead Software Engineer

- I worked with multiple teams advising system architecture, design, testing practices, and quality metrics selection.
- As part of the SOA migration, I designed and wrote authentication and edge proxy services.
- To build inter-department communication and learning, I started regular internal seminars. When things hit the fan, I was appointed to a specialized team to fix performance issues.

### Senior Software Engineer

- I was the lead for moving a monolith to SOA (Microservice wasn't a thing yet).
- As part of this, I defined and built the blueprint for our next-generation service architecture, standardization of build, branching, version control, configuration, logging, and monitoring across the company.
- To facilitate our existing non-technical quality team, I designed and built a DSL-based testing harness for integration and systems tests.

## Domo Technologies

Jul 2011 – Apr 2013

### Software Engineer

- We developed a platform for data storage, organization, normalization, and transformation for internet-scale visualization and analysis.
- I designed and built the streaming data pipeline to load data and perform ETL transforms through plugins developed in-house by external teams.

## Elastra

Dates Employed Nov 2007 – Apr 2011

### Software Engineer

- We built and maintained a Cloud normalization API and SDK to allow services to be agnostic of the underlying platform. If that sounds hard now, try it in 2007.

## NASA

Dates Employed June 2007 – Sep 2007

### Lunar Image Processing Developer

- Easily the best title I've ever had.
- I created Street View style panoramas of the moon using archival footage.
- <https://moon.google.com>

## University of California, Santa Cruz

Sep 2006 – Jun 2007

- Bachelors in Computer Science

### Research Assistant

- As part of a research project with two graduate students, I developed a method for tracking human movement. Even in the presence of bulky clothing and using standard cameras such as those found in security systems.

## Additional Items

- Eagle Scout
- Amature Wine Maker
- Black Belt in Taekwondo
- I've rock-climbed Half Dome