

# ROB STEILBERG

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## EDUCATION

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Duke University, B.S. Computer Science

2014 – 2018

## EXPERIENCE

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### ForeFlight

Austin, TX

**Senior Software Engineer**, 2022 – present

- Currently developing new capabilities to improve access to navigational data for ForeFlight customers, building experience in avionics integration
- Represented ForeFlight at EAA AirVenture Oshkosh, SUN 'n FUN, and various aircraft owner conventions, providing in-person support, product expertise, and sales guidance
- Designed and built the backend for Reported Turbulence, a real-time pipeline of turbulence data powered by ForeFlight's Sentry ADS-B receivers; check out the [AOPA article about the feature](#)
  - Leveraged Amazon CDK, SQS, SNS, CloudFormation, CloudFront, and [tippecanoe](#) to assemble a vector tileset that is rendered on the ForeFlight Mobile map
- Later extended this pipeline to cache live airport weather camera images from external sources like the FAA and NavCanada, supporting the release of the Weather Cameras feature in ForeFlight Mobile; check out the [Sporty's article about the feature](#)
- Shipped the backend for Insights, a major rework of ForeFlight's Airport and Business Comments feature
  - Designed the API and completed a PostgreSQL migration that preserved backwards compatibility for legacy ForeFlight Mobile builds
  - Contributed to the iOS codebase, fixing bugs that unblocked mobile feature development

**Server Developer**, 2021 – 2022

- Shipped a complete frontend redesign (Laravel to React) and backend rewrite (PHP to Spring) of ForeFlight's retail and contract aviation fuel pricing features with minimal user disruption
- Triaged complex, user-specific issues related to contract fuel pricing, typically deploying fixes within a day
- Mentored an intern who was later hired as a full-time employee

### Self-Employed

Austin, TX

**Certified Flight Instructor**, 2024 – present

- Providing primary, instrument, commercial, and recurrent flight instruction in Piper Cherokee aircraft

### Esri

Washington, DC

**Software Engineer**, 2018 – 2021

- Worked across the entire stack with the Esri R&D Center, contributing to UI/UX planning and feedback, frontend work with Ember.js, and backend work with Express.js, Elasticsearch, and Postgres
- Rebuilt ArcGIS Hub's obsolete domain resolution service as a scalable microservice with Express.js, which allowed us to wind down a legacy Ruby on Rails app that reduced annual server costs by approximately \$100k, all with zero downtime
- Contributed to Esri's open source, cross-team TypeScript libraries, plus several popular Ember.js libraries
- Represented the team at the Esri User Conference and the Esri Developer Summit, engaging directly with customers
- Mentored several interns and new hires on development workflows and tooling

**Intern**, summer 2017

- Prototyped an Ember.js app that templatizes ArcGIS Online mapping applications, making them compatible with any Esri-hosted dataset and improving app buildout time by over 85%

## Clinica Esperanza

Roatán, Honduras | Spanish language proficiency

- Directed UI/UX design, system architecture, and product development for mVax, an Android app used to record immunizations and generate standardized vaccination reports; led a team of six
- Completed onsite deployment in July 2018, increasing the clinic's overall vaccination throughput
- Provided onsite technical support to clinic employees along with website maintenance, strategy, and SEO optimization for fundraising

## Volunteer Engineering Lead, 2018 – 2023

## TECHNICAL SKILLS

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**Current:** Java (Spring), JavaScript, Node.js (React, Express, Ember), HTML/CSS, Redis, Docker, nginx, avionics integration, SQL (PostgreSQL, SQLite, MySQL), AWS (CDK, CloudFormation, Route 53, ECS, S3, SNS, SQS, CloudFront, and others); basic knowledge of Swift, Objective-C, TypeScript, and MongoDB

**Previous:** Python, Rust, C, C++, Ruby (Rails), R, Lisp (Racket), PHP, MIPS, Android, Firebase, jQuery, Elasticsearch, Kubernetes

## AVIATION EXPERIENCE

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### Certifications

Hours (August 2025)

**Total:** 917.3

PIC: 788.0

Instrument: 100.1

Cross-Country: 318.2

Multiengine: 33.5

Night: 90.8

Complex/Retract: 75.1

Tailwheel: 19.7

### Types (specialties bolded)

C172/152, P28A/B/R, BE23/35/76, CH7B, BL8,

FA62, PIVE

## PERSONAL WORK

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### roob1090

- roob1090 is a custom dump1090-powered ADS-B data ingestion pipeline that drives a real-time flight tracking API, built with Rust, Python, Express.js, MongoDB, and Docker
  - The hardware layer parses ADS-B signals decoded by dump1090 and then transmits aircraft position reports via WebSocket to an Express.js server
  - The server layer geofences individual flights into specific approaches at AUS and enriches the dataset with aircraft type and routing information from OpenSky and FlightAware
  - The API is hosted at [aircraft.robsteilberg.com](http://aircraft.robsteilberg.com) and is powered by a Raspberry Pi on my apartment balcony

## INTERESTS

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- SCUBA diving, holding PADI/SSI Open Water, Advanced Open Water, Rescue, Nitrox, and spearfishing diving certifications
- Global health and humanitarian work in Latin America, with additional experience in Guayaquil, Ecuador working at an equine therapy rehabilitation center for children with special needs
- Photography, piano, volleyball, swimming, and weightlifting