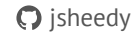


JOSEPH L. SHEEDY

Staff Scientific Software & Data Engineer

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jsheedy



josephsheedy

SUMMARY

Staff software engineer and team lead with M.S. in Atmospheric Science, building mission-critical weather systems for autonomous robotics and 20+ years in high-performance, large-scale engineering

EXPERIENCE

2025 Staff Scientific Software Engineer

↑ **Zipline** ↗ [zipline.com](https://www.zipline.com) | South San Francisco, CA

- 2022 • Conceptualized, architected, built, deployed, and maintained an operational weather nowcast system automating go/no-go decisions for thousands of daily commercial autonomous drone flights around the globe
- Weather safety targets exceeded in commercial operations
- Engineered Cloud-native services to generate and communicate nowcast and observational data
- Joined Data Platform team to design and implement the company's log data lake and telemetry ETL+API services, unlocking fleet wide log analysis
- Procured off the shelf ground weather stations, built ETL and API services, and integrated into the infrastructure
- Installed and integrated end-to-end a remote weather satellite downlink station
- Mentored engineers and drove projects end-to-end from concept through long-term maintenance

2022 Senior Weather Forecast Engineer & Platform Engineer

↑ **Saildrone** ↗ [saildrone.com](https://www.saildrone.com) | Alameda, CA

- 2019 • Led Weather and Data Pipeline teams
- Architected and developed first company data lake, unlocking fleet wide analytics
- Built one-click end-to-end solution for offloading payload and telemetry data from drones over wired network or hand carried intelligent portable storage devices
- Re-engineered global weather forecast system from first principles resulting in higher quality forecasts for fleet operations and commercial applications teams while achieving orders-of-magnitude efficiency and cost improvements
- Designed and deployed cloud-native Python services using chunked gridded storage (Zarr, NetCDF) processing >100 GB of forecast data daily with low latency
- Owned Kubernetes deployments and observability infrastructure for production forecast platform, enabling path planning of a global autonomous fleet
- Mentored engineers and drove projects end-to-end from concept through long-term maintenance

2018 Senior Software Developer

↑ **Rooster Park** | Seattle, WA

- 2018 • Founding full stack engineer for a political domain analytics engine and CMS
- Stood up React frontend, Python backend, AWS infrastructure, and CI/CD for hyper-growth phase

2017 Senior Software Developer

↑ **Rooster Park / Vulcan Inc.** ↗ [vulcan.com](https://www.vulcan.com) | Seattle, WA

- 2014 • Converted from Rooster Park contract to FTE after successful full rewrite of the Sea Around Us fisheries model and analysis tools
- Led migration of legacy Visual Basic / ASP.NET ecological modeling suite to high-performance Postgres/Python/Angular resulting in large usability and performance gains
- Open-sourced core components including D3-based mapping framework to meet geographic projection requirements
- Designed and shipped real-time RabbitMQ event system for radio-collar wildlife tracking
- Developed high-precision AR prototypes in Unity3D + Python/OpenCV/numpy for beacon-based localization
- Developed AR vision system for sporting events (US Patent 10,325,410: Augmented Reality For Enhancing Sporting Events)

EDUCATION

M.S. Atmospheric Science

- University of Alaska Fairbanks (2000)

B.S. Atmospheric Science

- University of Washington (1998)

B.S. Physics

- University of Washington (1998)

Neural Networks and Deep Learning (Coursera (deeplearning.ai))

SKILLS

Languages & Tools

Python, Typescript, UNIX shell, Ruby, Go, C/C++, C#, Rust, Java, Kubernetes, AWS, FastAPI, React, deck.gl, D3.js, GLSL, Unity3D

Data & Science

Numerical weather prediction, Parquet, Zarr, NetCDF, xarray, Dask, OpenCV, scipy, DuckDB, PostGIS, H3, Kafka, RabbitMQ, python-asyncio, HRRR, MRMS, METAR, ECMWF, GOES, EUMETSAT

Leadership & Practices

Team lead, Mentor, System Architecture, CI/CD, Observability

- 2015 [Part-time Instructor – Python 300](#)
↑ [University of Washington Professional & Continuing Education](#) | Seattle, WA
- 2013 [Owner & Lead Developer](#)
↑ [Velotron Heavy Industries](#) | Seattle, WA
- 2007 [Senior Developer](#)
↑ [ClipCard \(formerly OneOcean\)](#) | Seattle, WA
- 2012 [Developer & Systems Administrator](#)
↑ [3TIER \(now Vaisala\)](#) | Seattle, WA
- 2007 [Java Developer](#)
↑ [Chronotechnic](#) | Seattle, WA
- 2002 [IT Manager & Developer](#)
↑ [OEOne](#) | Gatineau, QC
- 2001 [President & Technical Consultant](#)
↑ [Arctic Fox Technology Incorporated](#) | Fairbanks, AK
- 2000 [Scientific Programmer & Web Developer](#)
↑ [University of Washington](#) | Seattle, WA
- 1996 [Field Tech & Software Developer](#)
↑ [New Mexico Tech at Langmuir Laboratory](#) | Socorro, NM
- 1997