

adrian wan

algorithms design & software engineer @ Nest

contact

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🌐 awan1.github.io

in Inked.in/awan

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software

♥ Python

(pandas, SciPy)

Scala · MATLAB

gRPC · Protobuf

GCP · Kubernetes · Docker

♥ Git

Atlassian Stack

(Stash, JIRA)

influences

Pragmatic Programmer

Wait But Why

Less Wrong

about

I build clean, extensible, flexible codebases to make work better.

experience

2015–

Nest

Algorithms Design & Software Engineer

- Created **Python prototype** of service, device, & app interactions to **validate end-to-end behavior**:
 - **Designed & implemented a modular framework** supporting CLI interactions, batch testing, & **arbitrary substitution** with real components;
 - Enabled **novel** integration and end-to-end tests of **user-facing behavior**;
 - With understanding gained, **self-taught Scala** to assist services team, **implementing & shipping** changes to consumer-facing services.
- Deployed & owned a **gRPC microservice** to buffer teams from instability:
 - Supported ~20 people across 4 teams, **balancing** contrasting needs;
 - Leveraged GCP & Kubernetes for **auto-scaling & no-downtime** rollouts;
 - **Developed processes** around frequent breaking changes to ease development; used **tiered deployment & extensive smoke tests** to enable **isolated testing** of affected components. Sped up debugging ~5x.
- **Re-engineered** a MATLAB script-based, labor-intensive process for temperature sensor modeling into a streamlined, **extensible Python library**:
 - Abstracted **mathematical models** for rapid prototyping & exploration;
 - **Continues to be used** for customer issues & future products.

2014

Nest

Algorithm Design & Data Science Intern

- Spearheaded Python prototyping of **data-driven customer product**:
 - Developed, implemented, & evaluated on-device sensor data models;
 - Employed **test-driven development** to publish a modular, extensible modeling package, used within team to prototype related features;
 - **Balanced** development with research-style data analysis.

2013–2014

Swarthmore Spheromak Experiment (SSX)

Research Assistant

- Developed Python (SciPy, pandas) analyses of plasma wind-tunnel data.
- Received the **Outstanding Undergraduate Poster Award** at the APS Division of Plasma Physics 2013 Meeting; **coauthored** papers published in *Physical Review Letters* & in *Plasma Physics and Controlled Fusion*.

education

2011–2015

B.A. Physics & Computer Science
Cum. GPA: 3.9 · *Phi Beta Kappa*

Swarthmore College, Swarthmore PA

for more

Publications & more experiences are on my personal website & on LinkedIn.