Zane Dufour

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MOBILE
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I am a software engineer with 5 years of experience in Software Development and Machine Learning. I'm a huge fan and advocate of python, but I love learning new frameworks and languages (currently golang and lua). As a senior engineer, I'm equally comfortable leading high-level architecture discussions, pairing with junior devs, and debugging problematic incidents. If you like reading LaTeX, feel free to check out the source for this resume.

EXPERIENCE

Aspiration Inc
Senior Software Engineer - Backend
Remote
January 2022 - Present

Developed shared libraries and consumer+business-facing backend services. This included working with go, kubernetes, terraform, and multiple AWS services. Implemented a circleci orb for installing and running `pre-commit` hooks to enforce code quality standards. Added end-to-end tests to our serverless functions, thereby ending a series of incidents where broken lambda configurations made it through our CI to deployment. Improved application observability; integrated Datadog distributed tracing & logging. On multiple occasions, used snowflake queries to determine the cause and impact of production incidents.

Ford Motor Company
Software Lead
Dearborn, MI
February 2020 - January 2022

As the technical lead of the model-training-as-a-service product team within Ford's Mach1ML platform organization, I drove adoption of modern python development tools (`poetry`/`pipenv`, `black`, `pre-commit`, `tox`, etc.). Championed the replacement of `flask` with `fastapi` for REST API development by adding a `fastapi` wrapper to the team's project bootstrapping tool. Significantly sped up the process for the review & approval of pypi packages. Worked with other tech leads to plan cross-team integrations. Led the early development and design of the platform's python SDK. Worked hands-on with internal customers to onboard production Machine Learning use-cases. Mentored a large team of (10) junior developers & data scientists, with an eye towards documenting the solutions to recurring issues.

Ford Motor Company
Machine Learning Engineer
Dearborn, MI
November 2017 - February 2020

Developed likelihood-to-purchase models for tens of millions of consumers. Helped the team adopt Github for version control. Created and distributed a python package to streamline the process of instantiating a pyspark driver on Ford's High Performance Computing cluster. Drove adoption of test-driven-development and static code analysis for our python libraries and flask services.

Disney Imagineering
Software Engineering Intern
Glendale, CA
June-September 2017

While working in the Disney Imagineering Media and Art Pipeline group, I developed software used for projection mapping in Disney's parks and resorts. I built a continuous integration system for multiple interdependent applications which were used for different parts of the projection mapping pipeline.

Intel
Software Engineering Intern
Santa Clara, CA
February-August 2016

During this six month internship at Intel, I worked on a desktop application for technicians to work with manufacturing robots. While on the team, I added an exception-handler and a sqlite-based logging system for tracking test metadata. This was the first time I worked in a large code base and learned to write maintainable code.

UC Berkeley
Research Assistant
Computational Geometry
Summer 2015 - Fall 2016

While working as an undergraduate research assistant, I worked on a spectral geometry morpher in C++ and a Houdini tool for generating parameterized geometry.

EDUCATION

UC Berkeley,
May 2017

Double Bachelor's – Applied Math and Physics
GPA 3.4

Relevant Courses

Intro to Computer Science, Machine Learning, Spectral Methods in Computational Fluid Dynamics (Graduate), Upper-Division Linear Algebra, Numerical Methods