

Andrew Fiorillo

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LINKS

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EDUCATION

UNIV. OF SOUTH FLORIDA
MA IN APPLIED MATHEMATICS
 Jan 2017 to Nov 2017 | Tampa, FL
Moved to Germany Before Completion

NEW COLLEGE OF FLORIDA
BA IN PHYSICS, WITH HONORS
 May 2015 | Sarasota, FL

RELEVANT SKILLS

LANGUAGES

Primary: Python • Go
Secondary: Java • Type/JavaScript • Rust
Spoken: English (Native) • German (A2)
 Italian (A2)

GOOGLE CLOUD PLATFORM

AppEngine • Cloud Functions
 AutoML • Translation & Vision APIs
 Compute Engine • Kubernetes Engine
 Firestore • BigQuery • CloudSQL

AMAZON WEB SERVICES

Lambdas • EC2 • Elastic Beanstalk
 DynamoDB • RDS • SNS/SQS
 EKS • ECS/Fargate • Guard Duty
 Organizations • CDK • Transit Gateway
 Redshift • Athena • Kinesis

BACKEND DEVELOPMENT

Flask (Py) • net/http (Go) • FastAPI (Py)
 Spring (Java) • Express (Js) • Django (Py)
 Echo (Go) • Celery (Py)
 SQLAlchemy • Alembic • PostgreSQL
 Redis • PostGIS • MongoDB
 Protobuf • Docker • Kubernetes • Helm

GENERATIVE AI

OpenAI API • PaLM • Langchain
 pgVector • Pinecone • Chat Bots
 RAG • GPT UI (self-hosted ChatGPT)

MONITORING

StackDriver • DataDog • Sentry
 Fluentd/Fluentbit • Vector • OpsGenie
 Loki • Prometheus • ELK-stack
 AWS CloudWatch • X-Ray • Grafana

DATA SCIENCE

TensorFlow • OpenCV • Caffe
 scikit-learn • Pandas • Numpy/Scipy
 GLMs • Ensemble Models • CNNs

PROFESSIONAL EXPERIENCE

STAFF ENGINEER | DELIVERY HERO

Jan 2023 - Present | Berlin, DE

I returned to Delivery Hero as member of the technical leadership team for a department of ~100 FTEs. Much of my focus was on cost saving initiatives and inter-departmental projects. To these ends, I was able to support promising engineers in the department through mentorship and technical discussions.

- *Efficiency*
 - Led a consolidation effort to convert a microservices system into a monolith, with zero downtime in any of the 60 operating countries and resulting in a 70% decrease in operational costs.
 - Drove a cross-vertical initiative to adopt a new architecture for chat systems, with the impact of reducing the overall load on the systems (their cost, and latency for users) by about half.
- *Software Design*
 - Consulted in the development of several LLM-based projects, using OpenAI and other vendors. One of which is used by over 100k daily-active users.
 - Wrote and contributed to many architecture reviews, technical design documents, and RFCs. The scope was both within my department, and across the several regional platforms of Delivery Hero.

L8 ARCHITECT | CODILITY

March 2022 - Nov 2022 | Berlin

I joined Codility as a principal architect in the product/engineering division. After a relatively short period I served as interim director of the content teams, where we expanded the content library and improved QC processes.

- *Software Architecture*
 - Drove an AWS cost reduction effort that reduced company-wide monthly expenses by ~20%.
 - Supported implementation of a large-scale assessment engine, enabling 10k engineers to simultaneously participate in an automated assessment.
- *Management*
 - Prepared the technical team (including CTO) for a due diligence process, including: refining presentations, personalized coaching, dry-run exercises, and a post-DD follow up.
 - Managed the content teams (~50 FTEs) responsible for developing and curating the content library. Built software tools which increased the rate of newly created programming tasks by just under 100%.

ENGINEERING MANAGER, SENIOR ENGINEER | DELIVERY HERO

Jan 2018 - Feb 2022 | Berlin, DE

I started working at Delivery Hero as a mid-level backend software engineer. My bread & butter was designing and building global backend services in Python and Go. I took on a management role and led a team of 10 engineers for over two years.

- *Management:*
 - Led a team of 10 engineers and data scientists to build an issue automation service within the global contact center.
 - Built dashboards for tech and business KPIs, used by stakeholders in over 50 countries.
 - Interviewed over 200 candidates both as a technical lead (evaluating mastery in Python/Go) and a "bar-raiser" (evaluating general potential).
- *Development & Design:*
 - Maintained 6 global (50+ countries) services. While I was on that team, the images & GIS service handled ~1 billion requests per day.
 - Designed a global feedback service (shared among DH brands) based on a stream-processing platform (not dissimilar to Apache Kafka).
 - Developed a customer self-service portal to deflect ~75% of issues for the contact center.

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PROFESSIONAL EXPERIENCE (CONTINUED)

ANALYST & TEAM LEAD | THE MODULAR COMPANY

September 2019 - March 2022 | Baarn, NL

I started freelancing for The Modular Company as a subject matter expert on cloud architecture. TMC performs technical due diligence on behalf of venture capital and private equity firms across the EU. With TMC, I participated in ~50 DD processes as an analyst and eventually in the role of team lead.

- During the research phase we construct a specialized questionnaire tailored to the target and the client's concerns.
- During the interview phase we conduct detailed 1-1 interviews with usually 10+ participants, covering from C-suite to engineers and supporting staff.
- During the writing phase we prepare a report that summarizes the findings from the whole process. The reports are ~30 pages with rigorous writing standards and always are delivered on a strict end-of-week deadline.
- When leading the team, I also handle client interactions and host a debriefing that summarizes the primary findings.

SOFTWARE ENGINEER | INSPIRATA

May 2015 - Jan 2018 | Tampa, FL

Inspirata is where I cut my teeth as a software engineer. I started fresh out of school with a firm knowledge of physics and scripting, but a lack of experience with building production systems. Over the course of nearly three years I worked with a group of researchers and built the services/tools they needed. I was lucky to be a part of this small startup and to learn their scientific approach to ML problems.

- *Data Engineering:*
 - Designed an FDA-regulated content management system for ~500 TB of clinical research data. Medical-specific requirements (such as double-entry for validation datasets) were handled.
 - Developed a proprietary ground truth collection app (Meteor.js & Leaflet) for labelling regions of interest. Built a plugin system to conduct task-specific clinical studies and distribute datasets among multiple users.
- *Development & Design:*
 - Optimized MATLAB and C++ (Mex) functions for low-level statistical and mathematical operations (~10x speedup). Increased test coverage to 95% for all low-level mathematical functions in the core library.
 - Built an image tile server to allow a flexible workforce to use the ground truth collection app. This enabled processing images from multiple sources, including proprietary formats and DICOM, and with high concurrency.

VOLUNTEERING

CODEBAR.IO | PYTHON INSTRUCTOR

An international education initiative to encourage underrepresented people to learn how to code. As an instructor, I provide one-on-one tutorials in Python for all skill levels – from basic loop structures to debugging asyncio-based web services.

SRQHACKS | COACH

A local hackathon in the Sarasota, Florida area. The purpose of the hackathon was to bring together 100+ students from the local public schools with ~30 professional programmers. As a coach, I helped students develop business propositions, understand the Lean development method, and build their MVPs.

ACADEMICS

MATHEMATICS

Probability & Statistics • Linear Algebra
Ordinary & Partial Differential Equations
Analytical Geometry • Vector Calculus
Numerical & Functional Analysis

PHYSICS

Classical & Quantum Mechanics
Statistical Mechanics • Electrodynamics
Solid State Physics • Acoustics
Special & General Relativity

COMPUTING & COMPOSITION

Analog Electronics
Signal Processing
Scientific Composition with \LaTeX
SVD Analysis

MORE SKILLS

FRONTEND DEVELOPMENT

Svelte • React.js • Meteor.js • D3.js
jQuery • Mocha.js • SASS/CSS • HTML

AUTOMATION & CI

Gitlab CI • Travis CI • CircleCI • Jenkins
Bash • Invoke (Py) • GNU Make

BIG DATA

Beam • Airflow • Kafka
Spark • Hadoop / MapReduce

MORE LANGUAGES

Proficient (in a pinch)
Bash • C++ • C# • Dart • Elixir
Fortran77 • R • Ruby

EDUCATION PLANNING

Lesson plan design • Childcare
Classroom management
Parent/Customer communications