Whitney Zoller

Brooklyn, NY | whitney.zoller@gmail.com | github.com/whitney

Experience

Principal Software Engineer, Ginkgo Bioworks / Biosecurity – Remote   March 2021 – present

- Engineering lead on Infrastructure team
- Responsible for the build out of all things AWS: databases/storage (RDS, DynamoDb, S3), compute (ECS/Fargate, EKS, Lambda, Batch), permissions (IAM), networking (VPC, Route53, subnets, security groups)
- Built / maintained data lake (Snowflake + dbt) for Biosecurity data team, including replication pipelines (using AWS DMS) for OLTP to OLAP replication
- Built and maintained Biosecurity CI/CD infrastructure using self-hosted (AWS) Github runners
- Responsible for AWS infrastructure migration from AWS CDK to terraform Migrated observability infrastructure from New Relic to Grafana realizing an 85% reduction in cost
- Drove AWS infrastructure cost-saving initiative resulting in 40% reduction of cost annually

Principal Software Engineer, Cigna – New York, NY   March 2019 – Feb 2021

- Building infrastructure to support and accelerate the development and deployment of machine learning models on AWS
- Extend and maintain systems for data science team to standardize and accelerate model development/deployment including: scalable notebook infrastructure for data exploration, feature development, data cleaning (PySpark on AWS EMR), ML model pipelines for training on AWS Sagemaker
- Perform ML model review, providing feedback on both operational/code issues and model quality to data sciences team
- Provide mentorship to business analysts interested in training in ML practice/theory/tooling
- Advocate for patient privacy: education and demonstration on the application of differential privacy in dataset querying and the generation of synthetic data

Principal Software Engineer, Oath / Verizon – New York, NY   March 2017 – July 2018

- Technical lead in the Video Intelligence team, leading a team of two engineers and one computer vision research scientist, with the goal to produce systems to ingest, analyze and augment videos with "lifelike" ads
- Utilized deep learning models for scene geometry predictions and object segmentation
- Designed and implemented an on-demand deep learning computer vision pipeline used for video augmentation tasks built on AWS
- Designed a protocol for client-side augmentation, handling ad-occlusion, and produced a proof of concept in collaboration with iOS and Android teams
- Engineering lead on video ranking project optimizing for video engagement in various Yahoo media content feeds
- Tech lead on video ranking project optimizing for video engagement in various Yahoo media content feeds
- Member of Video Org. Architecture group as representative of the Video Intelligence team; responsible for providing architectural feedback on new projects and determining road maps for ML projects within the Video Organization
- Member of the Interviewing Excellence team tasked with standardizing recruitment and interviewing procedures

Principal Software Engineer, Yahoo! Inc. – New York, NY   Jan 2016 – March 2017

- Architect and technical lead of the TradeIT integration enabling linkage with brokerages and equity/FX trading directly from the Yahoo Finance iOS or Android applications. This product provided a diversification of income streams from pure ads to trade commissions
- Designed and implemented a low latency content de-duplication system for Yahoo Finance's streaming content ingestion system using Apache Storm
- Core contributor to Yahoo Finance content APIs (Java)

Senior Software Engineer, Yahoo! Inc. – New York, NY   Feb 2014 - Jan 2016
- Sole back-end engineer working on a Yahoo "celebrity" (iOS) app that was designed, built and never released
- Designed and implemented RESTful APIs in Node.js for mobile clients enabling reading and interacting with novel forms of content (quizzes, interactive photo "stories")
- Built CMS in Node.js for creating novel forms of content which enabled user interaction

Software Engineer, Wander (acq. by Yahoo! Inc.) – New York, NY   2012 - 2014
- Served as the lead back-end engineer for "Days", a journaling social media app acquired by Yahoo in 2014, independently architecting and maintaining the entire server infrastructure
- Systems built: all client facing APIs (in Ruby on Rails) consumed by the Days iOS app including user account login flows, account settings, image uploads, GIF creation, "story" annotation, friend "graph" actions; persistence and data modeling using MongoDB; image processing pipelines for cropping/resizing/stitching using FFmpeg; internal CMS with web front-end for content curation, user debugging, and bulk messaging
- server code had > 95% unit/integration test coverage

Software Engineer, Rent the Runway – New York, NY   2011
- Responsible for software systems enabling order life cycle tracking, and management
- Designed and implemented a garment allocation system which reduced average order picking time and increased visibility into problem orders
- Designed and implemented an internal employee authorization scheme enabling warehouse activity audits

Software Engineer, Knewton Inc. – New York, NY   2008 - 2011
- Collaborated with staff Psychometrician on the collection and analysis of performance data pertaining to new assessment items for use in Computer Adaptive Testing (CAT)
- Designed and implemented RESTful APIs in Ruby on Rails application for student course schedules
- Core contributor to proprietary content management system
- Wrote mathematics content for GMAT, and logic games for LSAT

Education

Georgia Tech, MS Computer Science   May 2019

Columbia University, BA Mathematics   May 2007

University of California, Berkeley, BA Philosophy   May 2004

Extras

Patent: Computerized System and Method for In-Video Modification   Issued May 24, 2022
- Describes a novel process for modifying video frames with personalized ads such that they appear part of the natural scene
- US 11341744