

Andy Hayes

Software Engineer

Andy Hayes

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Summary of Qualifications

Problem solver with a hacker mindset. Ability to quickly learn, pick up, and apply new technologies to solve the most challenging problems.

Experience

Anno.Ai / Software Engineer

May 2019 - Feb. 2021, Vienna, VA

Developed a scalable security/surveillance system using Kubernetes, enabling customers to identify threats across thousands of cameras in near-real time. The system is used today to track people of interest across many cameras in a city.

Developed a scalable bulk data ingestion framework using Kubernetes, enabling customers to automate the exploitation of large datasets. The system is used today to ingest and exploit over 10TB of data in under 12 hours, finding documents/media of interest without human intervention.

Developed modules that extract text and dominant colors from images and video, enabling users to find people and objects of interest by physical characteristics (e.g white adidas t-shirt and blue jeans). This technology is used to counter human trafficking and locate missing persons, among other use cases.

Built systems that can be installed/run in air-gapped environments (disconnected from the internet).

Worked with and made impacts on all facets of the application (front/back end, server maintenance, CI/CD development operations).

Tournament Time / Founder, Software Developer

June. 2018 - May 2019, St. Paul, MN

Started a mobile game development company. Self taught mobile app development and implemented a custom game server.

Assembled a team and leveraged React Native and NodeJS to develop a beta version of our first project.

Distributed MVP to external users via TestFlight and iterated on early user feedback.

Experience (cont.)

Relevant Technologies

Microservice Architecture - Kubernetes, K8s API, Kafka, Docker, Skaffold, Github Actions (CI/CD Pipelines) Python (pip/poetry), NodeJS, Typescript,, Application migrations.

Machine Learning Service Integration - YoloV5, Tensorflow, Pytorch

Caching/Queuing - Redis, Kafka (Event-Driven Services)

DBMS - PostgreSQL

NoSQL - Elasticsearch

Data Serialization Formats: JSON, Protocol Buffers

API - REST, GraphQL, GRPC, Websockets

Web servers - NGINX

Cloud - AWS, Digital Ocean

Education

Macalester College / Computer Science, Applied Math

August 2015 - May 2019, St. Paul, MN

Member of baseball team, MacStartups fellow, TA for multiple semesters.

Relevant Coursework: Statistical Modeling, Multivariable Calculus III, Object Oriented Programming, Algorithm Design and Analysis, Software Design and Development , Differential Equations, Computer Systems Organization, Theory of Computation, Probability, Collective Intelligence, Machine Learning, Artificial Intelligence, Database Management Systems