Alexander Clines

Software Engineer / Engineering Manager

Santa Cruz, CA | me@alexanderclines.com | /alexander-clines

SKILLS

- Swift / Objective-C
- C / C++
- Python
- Bash / Shell

- iOS / macOS
- tvOS / visionOS
- Linux

- AWS / GCP
- Distributed computing
- Protocol Buffers

- Tableau
- Docker
- PostgreSQL

WORK HISTORY

Apple, Cupertino CA

Engineering Manager

September 2023 - Present

- I continue to lead the on device NL work described below
- Led dozens of engineers in different capabilities to support the new Apple Intelligence effort including:
  - LLM quantization, compilation, evaluation
  - On device runtime architecture
- Working on future focused projects to bring the latest advances in LLMs to Apple products

Senior Software Engineer

August 2020 - September 2023

- Member of the Siri Natural Language Platform team; brought NL to ondevice starting in iOS 15.
- Spearheaded performance optimization efforts, achieving optimal memory utilization and processing speed for NL models without compromising accuracy. This involved managing cross functional efforts with modeling and other Siri teams.
- Led the effort to expand our on device platform to support functionality outside of Siri increasing our impact to user experience
- Supported new hardware bring up efforts, optimizing NL Platform per hardware platform as needed
- Primarily worked with on-device development utilizing Objective-C / Swift
- Used Python/Tableau in offline environments for analysis on performance and monitoring metrics

Google, Mountain View CA — *Software Engineer*

July 2017 - August 2020

As part of the Google Language AI team I supported applying new NLP technologies towards various solutions at Google

- Implementation of latest unsupervised clustering methods that were scalable for large datasets and distributed computing. Presented this work at an internal Google Research conference.
- Uncovered new applications of LSTM networks for Google Ads.
- Optimized large BERT models for production using techniques including distillation.
- Designed/implemented or otherwise contributed to multiple core frameworks used internally for operating on NLP data including Sentiment Analysis models publicly accessible in Google Cloud.
- Acknowledged for my contributions for a dataset published & presented at EMNLP in 2018 in the paper "A Challenge Set and Methods for Noun-Verb Ambiguity"

EDUCATION

Texas Tech University , Lubbock TX — *Computer Science B.S. & Mathematics B.S.*

Degrees obtained in 2017