Anu Bandi

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Summary

Seasoned software engineer with 10+ years experience in Google Search team. Passionate about solving problems efficiently and at scale using first-principles. Interested in distributed systems, algorithms and machine learning.

Experience

Google Mountain View, CA

Software Engineer

- Homestack: Implemented a microservice architecture to improve widget (stocks, sports, etc.) data freshness
  - Reduced p50 staleness from 130min to 10min by updating widgets asynchronously through new API endpoints
  - Updated the feed backend, render and client to support round tripping of necessary data to ensure data consistency
  - Introduced a new freshness metric by updating the logging protocol and the logs processing pipeline
- Discover Feed: Improved feed ranking by leveraging deep learning
  - Increased user engagement (+2.72% bCTR, +1.55% TimeInFeed) by incorporating image signals into DeepNow
  - Designed a ranking framework based on card position to enable the team to run experiments quickly
- Google Stories: Led the backend team for a new search feature from ideation to launch on google.com & Google Home
  - Architected and built the data backend using Flume C++ (ETL pipeline) to join multiple internal/external sources
  - Increased developer velocity by designing a stories builder framework to support the creation of multiple story types
  - Worked in a highly cross-functional team with backend, frontend, designers, UX, and PM
- Personal Search: Updated Google Search stack to surface results from personal corpora (e.g. gmail, calendar, etc.)
  - Increased daily impressions by 150k (2.5x) by supporting implicit intent. Updated the bidding flow within superroot, ran SxS eval, and refined triggering/ranking logic
  - Expanded support from English to all 10 tier-1 languages, leading to 14k explicit non-English daily impressions. Worked with language specialists to collect training data and refine intent prediction model

Microsoft Redmond, WA

Program Manager Intern

- Designed a Java SDK that provides Azure service management ability through REST calls
- Wrote a functional spec with API signatures, competitor analysis, and code samples

IBM Durham, NC

Extreme Blue Intern

- Developed a virtual machine OS updating infrastructure for private clouds
- Programmed a software component for IBM Workload Deployer in python

Google Mountain View, CA

Software Engineering Intern

- Implemented a backup system for the OneGoogle library (3,000,000,000+ requests daily)
- Modified the OneGoogle Java library, C++ backend, and python scripts

Education

Georgia Tech Atlanta, GA

M.S. in Computer Science (Computing Systems & ML specializations)

University of Maryland College Park, MD

B.S. in Mathematics, B.S. in Computer Science

- Putnam Math Contest. Scored in the top 32%, 18% and 39%
- ACM ICPC world finalist (International Collegiate Programming Contest)

Projects

Distributed KV Service: Created a sharded self-healing key-value service using DSLabs framework, similar to Google Spanner. Implemented Paxos-based state machine replication to reach consensus among multiple servers without a leader

RL Lunar Lander: Used reinforcement learning to create a lunar lander agent within OpenAI gym environment. Trained a PyTorch model to learn a policy that maps a continuous observation space to a discrete action space

Skills

Languages: C++, Python, Java, Elm, F#, Clojure, SQL (Postgres)
Technologies: Spark, Docker, Kubernetes, GCP, Redis, Protobuf, gRPC, PyTorch, React