ARUNESH MISHRA

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SUMMARY

Hands-on engineering leader with strong background in Agentic AI, Algorithms and Distributed Systems. Looking for a leadership role in a challenging and high impact domain.

EXPERIENCE

Co-founder and CTO   June 2019 – Present
Picolo Labs   *Mountain View, CA*
- Talkbox Project: On-device privacy friendly AI. Includes US Coast Guard, state and other federal agencies as customers.
- Wave Project: Scalable end-end encrypted Virtual Reality and Video conferencing system.
- Privacy friendly federated learning using Fully-Homomorphic encryption algorithms.
- Raised seed round from Menlo Ventures, Village Global (Eric Schmidt)
- Awarded Research grant by the National Science Foundation (NSF), matched by state government.

Co-founder and CTO   2017 – 2019
Incept AI   *San Mateo, CA*
- Chat-based AI assistant on Android to automatically take actions on the user's behalf
- Engineered a knowledge base for the AI assistant consisting of mobile app screens, action traces and user intents
- Launched and grew the app to a total of 100K+ users

Tech Lead, Senior Software Engineer   Jan 2013 – Feb 2017
Google Inc   *Mountain View, CA*
- Launched a network stack for peer-peer gaming on iOS and Android via Google Play Games SDK. Designed and implemented the network stack that maintains performance under changing network conditions and NAT topologies. Worked with the CEO of VectorUnit for RipTide demo at Google I/O to showcase the platform.
- Launched an API called Google Nearby that can transmit small amount of data securely over near-ultrasound for mobile phones. This can be used to authenticate people in same physical room and securely measure physical distance between phones to under 1 inch accuracy. Responsible for the stack on iOS and Android.Google Nearby grew from inception to 500M daily users.
- Formed a team under Marissa Mayer to build an Android app that can automatically determine if two people are in the same physical room.

Software Engineer, L4   2008 – 2013
Google Inc   *Mountain View, CA*
- Launcehd Wifi-based location services for 3+ Billion users on Android and Chrome from inception. Build Wifi-RF based location clustering algorithms, traffic prediction and business occupancy prediction algorithms.
- Designed and implemented a distributed system to compute user location using Wifi and Cellular base stations. System self-learns from Android users with a GPS fix to push location to indoor-users using statistical and randomized signal propagation algorithms.
- Built cellular remap detection and localization technology, which powers Google's Mobile Maps software (1B+ downloads, most popular app on mobile).
- System is now used on Android, WinMo and Blackberry phones. Also works on browsers using HTML 5 Geolocation API, such as on Mozilla's Firefox and Chrome browser, also launched with Google's Toolbar for Microsoft's Internet Explorer.
- Algorithms serves over 3 Billion location computations per day on Android and powers Google's mobile Ads business unit. The success of the Wifi project helped grow the team to 70 Engineers (from 3).

AWARDS AND HIGHLIGHTS

- Experience in Machine Learning, Agentic LLM use, Fine-tuning methods, NLP/NLU applications, design of AI Assistants, On-device privacy and security centric AI, Network protocols, Systems security, Fully homomorphic encryption systems (FHE).

- Recipient of prestigious Google's Founder award for innovation. Presidents Gold Medal at IIT.

- 52 awarded patents on algorithms, security, networking, machine learning and distributed systems. Best paper award at top ACM conferences.

- 0 to 1: Started 3 product teams at Google including p2p networking on Android/iOS, led them to a Billion+ daily users.

- Raised funding from Eric Schmidt (Google ex-CEO) for Picolo Labs. Awarded NSF Research Grant for startup innovation.

EDUCATION

University of Maryland   College Park, MD
Ph.D. Systems Security, M.S. in Computer Security   *Advisor: Dr. William Arbaugh*

Indian Institute of Technology   Guwahati, India
Bachelor of Technology   *Awarded President's Gold Medal*