

Ajeet Kumar

Engineering @ Google · Agentic AI | ML | Computer Vision | Wireless Networks

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SUMMARY

Software engineer with over 15 years of experience spanning agentic AI/LLM orchestration, smart home automation, and 5G/LTE wireless modems. Co-engineered an agent framework from 0-1 using C++ and LLMs to power complex reasoning loops at Google. Architected 5G and LTE protocol stacks (RLC, PDCP, NAS, MAC) during an 11-year tenure at Qualcomm. Granted 5 US patents across wireless technologies and thermal mitigation systems. Strong programming expertise in C++, Python, Go, C, Java, Perl, Protocol Buffers, SQL, and Shell Scripting.

EXPERIENCE

Senior Software Engineer · Google

Mar 2024 — Present · India

- Co-engineering an agent framework from 0-1 in C++ to power complex LLM reasoning loops.
- Building Cloud ML services and managing TPU / large-model serving infrastructure for Nest camera perception and real-time captioning.

Staff Engineer · Qualcomm

Nov 2020 — Mar 2024 · Hyderabad, India

- Developed 5G spec features (ENDC/NRDC), PDCP UL Status PDU handling, and ROHC on the 5G L2 data path.
- Delivered Qualcomm's first production edge-ML use case on wireless modems — C++ modules integrated with AWS SageMaker.
- Filed 4 IDs; built process-improvement tooling that eliminated manual intervention from team workflows.

Senior Lead Engineer · Qualcomm

Nov 2017 — Oct 2020 · Hyderabad, India

- Delivered the NextGen eCall feature and simultaneous voice-and-data capability.
- Designed multi-SIM features from the Non-Access Stratum layer.
- Led reorganization of the codebase from a three-thread to single-thread architecture for low mem/CPU targets.

Senior Engineer · Qualcomm

Nov 2014 — Oct 2017 · Hyderabad, India

- Dev Lead for the eCall feature across Qualcomm's global sites.
- Designed and delivered multi-SIM features from the Non-Access Stratum layer.

Engineer · Qualcomm

Oct 2012 — Oct 2014 · India

- Key contributor on the Triple SIM project and SGLTE feature; multi-protocol system selection algorithms.

Software Engineer · Aricent Group

Jun 2010 — Oct 2012 · India

- Built LTE eNodeB MAC schedulers (QoS, round-robin) and Inter-Cell Interference Coordination features.
- Replaced a mesh Diameter Signaling Router topology with a single central router — UI and backend.

PATENTS (5 granted, US)

- Thermal mitigation systems and methods for multi-subscription devices
- Techniques to facilitate prioritizing PDCP protocol data units in dual connectivity
- Bi-level bi-class thermal mitigation technique for single/multi-SIM devices

- System and methods for improving network registration for all SIMs of a multi-SIM device using a dynamically-determined registration order
- Systems and methods for optimizing network registration for all SIMs of a multi-SIM device using criticality-based prioritization schemes

CERTIFICATIONS & EDUCATION

- Master of Computer Applications (MCA), Birla Institute of Technology — 2007–2010
- Generative AI with Large Language Models — DeepLearning.AI
- Structuring Machine Learning Projects
- Machine Learning A-Z™: Hands-On Python & R in Data Science
- AWS Machine Learning Engineer Nanodegree

SKILLS

Languages: C, C++, Python, Go, Java, Perl, SQL, Shell | **ML/AI:** LLM agent orchestration, computer vision, TPU/model serving, AWS SageMaker | **Systems:** 5G/LTE (RLC, PDCH, NAS, MAC), Linux, embedded systems, protobuf