

## Mr. Kuang, Jilong

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### SUMMARY

Technical engineering manager with 15 years of experience in software engineering and 9+ years leading and managing software engineers and digital health researchers in consumer health space. Proven experience leading cross-functional technical work, managing global team of 40+ in collaborative development across 5 time zones. Deep understanding of wearables, time-series sensor signals, Health AI/ML/GenAI, and AI-assisted workflows. 10 years of experience in developing mobile/wearable/server software, conducting clinical trials and launching commercial consumer health products. Strong communication and people & project leadership skills. 109 peer-reviewed publications and 45 patents in consumer health AI/ML/GenAI domain.

### SELECTED LEADERSHIP IMPACT

- Led and launched Samsung Health Assistant (GenAI health coaching chatbot) in US, the first GenAI conversational product for Samsung Health app in 2026.
- Led and launched Energy Score Insights (GenAI personal insights) globally, the first GenAI product for Samsung Health app in 2024.
- Led and launched HeartWise (Virtual Cardiac Rehab) in US with Kaiser Permanente, the first virtual care digital service for Samsung Health app in 2018.
- Built and led a 40+ person global GenAI team for health AI product incubation and commercialization from 2023 to 2026.
- Built and led a 10+ person digital health research team for biomarker algorithm development using sensor signals from Samsung phone, watch and earbuds from 2017 to 2023.
- Built and led a 20+ person software engineering team developing SOC2-certified & HIPAA-compliant health platform for clinical trials, data collections and digital health service innovations with major US hospitals and universities from 2016 to 2023.

### WORK EXPERIENCE

#### **11/2023-present Director, Head of GenAI Engineering Team at Samsung Research America (SRA)**

- **GenAI Health.** Found a global team of 40+ to develop and commercialize LLM-based health features for Samsung Health users based on their wearable data and medical records. Provide hyper-personalized health insights, agentic health coaching services and care at home experience for millions of Samsung Health users globally.
- **Engineering Leadership & AI Workflows.** Foster a culture of engineering excellence with AI tool adoption, rapid learning velocity, and high performance while maintaining team health and long-term sustainability. Champion modern engineering practices by incorporating agentic coding and AI-driven development workflows into the team's prototyping and delivery cycles, increasing execution speed.
- **Global / Asynchronous Execution.** Drive asynchronous collaboration across cross-functional partners in multiple time zones (US, India, Brazil, Korea, Europe), ensuring alignment between discovery initiatives and overarching product strategy.
- **Cross-Functional Collaboration.** Drive partnership and work closely with Product Management, Design, Clinical teams to negotiate technical trade-offs, product launch schedules, define evaluation criteria and ensure delight yet safe consumer experience.

#### **03/2021-10/2023 Director, Head of Digital Health R&D Team at Samsung Research America (SRA)**

- **Digital Health.** Built the second generation of SOC2-certified & HIPAA-compliant cloud platform on AWS. Partner with medical domain experts to develop advanced health features based on Samsung's mobile devices (smart phones, smart watches, earbuds) to help consumers monitor and manage their health at home and on-the-go.
- **Algorithm & ML Integrations.** Guided architectural discussion and evaluate trade-offs for embedded ML/algorithmic models running on low-power device hardware (earbuds) and mobile platforms. Oversaw the technical roadmap converting raw sensor signals (PPG, rPPG,

ECG, IMU, audio) into validated algorithms and production-grade health features.

- **Cross-Functional Technical Delivery.** Spearheaded early stage discovery projects from initial concept and hardware/firmware integration through prototyping, validation, and final productization. Work closely with AI/ML researchers, software engineers, physicians, patients and university professors.

**03/2017-02/2021 Senior Staff, Head of Digital Health R&D Team at Samsung Research America (SRA)**

- **Digital Health.** Built SRA's first SOC2-certified & HIPAA-compliant end-to-end digital health platform for data collection, cloud processing and health data analytics. Co-innovate with major hospitals to develop digital solutions and build services & prototypes for key disease states. Operate real patient pilots and trials to validate our work.
- **Software Team Development.** Found and led a team of 20+ software engineers in full stack development ranging from on-device firmware to wearable/mobile app (Android/iOS); from server backend infrastructure to clinician/research web portal. Applications range from virtual cardia rehab, pulmonary rehab, cancer oral-chemotherapy and CHF remote monitoring.
- **Research Team Development.** Found and led a team of 10+ Ph.D. researchers in digital biomarker algorithm development using sensor signals from Samsung phone, watch and buds. Applications range from human activity detection, respiratory health, heart health, mental health and musculoskeletal health.

**03/2014-02/2017 Staff Research Engineer at Samsung Research America (SRA)**

- **Connected and Mobile Health.** Prototyped a scalable and secure cloud application for facilitating doctor-patient interaction, monitoring and engagement. Developed Restful APIs to collect patient's data from smart phones/watches. Worked on data flow pipeline and database storage in the cloud.
- **Time-series Data Platform for IoT.** Developed an efficient and scalable time-series traffic generator. Developed a user-level network subsystem based on Linux exokernel framework. Worked on stream processing (in-store computing, indexing, storing and querying) large volume of time-series data for both SQL and NoSQL databases.
- **Intelligent Platform for Cloud.** Developed distributed RDF storage layer to store and retrieve billions of triples. Worked on parallel bulk loading for RDF triples based on MapReduce framework. Worked on SPARQL query optimization and parallel RDFS/OWL inferencing.

**11/2011-02/2014 Senior Research Engineer at Samsung Research America (SRA)**

- **Distributed Caching for Multicore servers.** Developed high throughput and low latency in-memory key-value storage system for large-scale datacenters in both Linux and L4 microkernel OS. Developed highly-optimized Intel 10G NIC driver and IP stack processing to accelerate the network subsystem.
- **OS Research for Multicore/Manycore Platforms.** Researched and prototyped L4 microkernel-based OS for future multicore/manycore systems. Built run-time environment to support scalable and secure resource management and device driver framework.

## **EDUCATION**

**09/2006-11/2011 University of California, Riverside (UCR), USA**

- Department of Computer Science and Engineering, **Ph. D**
- Advisor: Prof. Laxmi Bhuyan
- GPA: 3.87/4.0; Major GPA: 3.95/4.0

**09/2002-06/2006 Beijing University of Posts & Telecommunications (BUPT), China**

- School of Computer Science and Technology, **B.E**
- Overall GPA: 3.7/4.0; Major GPA: 3.9/4.0
- Rank: Top 3%, 5<sup>th</sup> out of 190

## **PUBLICATIONS & PATENTS**

- 100+ peer-reviewed publications in top-tier journals and conference
- 40+ granted & pending patents