PAVAN KUMAR RAJA

pavanyyf@gmail.com, praja3@asu.edu | linkedin.com/in/pavan-kumar-novfourteen/ | github.com/Pavan-pk

Education

Arizona State University Tempe, AZ
Master of Science in Computer science *Graduating May 2023*

- Relevant coursework: Foundations of algorithms, Natural language processing (NLP), Deep learning.

R V College of Engineering (Affiliated to VTU) Bangalore, India
Bachelor of Engineering in Electronics and Communications; GPA – 8.43/10 *July 2016*

Languages, Technologies and MOOC

Languages and skills: Python, C++, Java, JavaScript, Android, C, SQL, Machine learning, Deep learning.

Frameworks/ Tools: Torch,ReactJS, Keras, Git

MOOC: DeepLearning.AI–Deep Learning Specialization, DeepLearning.AI–Natural Language Processing Specialization.

Experience

Software Engineer (Core member, Motorola Digital Account (MDA)) Aug 2020 – Jul 2021
Motorola Mobility LLC *Bangalore, India*

- **Security Framework:** Lead Architect and developer of security framework for web communication and storage applications in MDA.
- **Scan and Pay in MDA:** Design, prototyping, and development of hardware interface (Camera & Gesture) and associated UI for MDA.

Software Engineer (Python & C++ expert, Over-The-Air updates) Jan 2018 – Aug 2020
Motorola Mobility LLC *Bangalore, India*

- **Virtual A/B:** Individual contributor in bringing up Virtual A/B updates (Idle mode update with a single set of system memory) on Motorola products.
- **Update analytic suite:** Designed and developed a collection of scripts to – predict Copy-On-Write memory requirement for each software update, analyze super partition during update & merge phase, parse & encode snapshot metadata in protobuf format, etc.,
- **Package generation re-design:** The sole architect and developer in redesigning the entire package generation module to make update packages compatible with seamless updates across multiple chipsets. Achieved more than 30% of resource savings on build systems with optimization.
- **Smart Updates:** Automatic software updates by leveraging context awareness machine learning engine.

Associate Software Engineer (R&D) July 2016 – Jan 2018
Motorola Mobility LLC *Bangalore, India*

- **Modern seamless software update architecture:** Bringing up Dynamic, streaming, and classic A/B updates using super image concept and virtual devices.
- **Update health and metrics:** Developed framework to monitor update campaign health.
- **Update package size reduction:** Integrating Brotli diff generator into package generation module, resulting in 20% package size reduction.
- **Block updates:** Key contributor in bringing up block-based updates on UFS device allowing Motorola android devices to have plasticity in partition layouts for subsequent updates.

Senior year project

E-nose (2016): Lung cancer classification using pattern recognition on sensor data and classifier model based on SVM. Resulted in 70% accuracy in detection and classification.

Awards

Motorola Team Excellence Award Motorola Mobility LLC
Recognition for design and implementation of seamless updates and 5G mod OTA. *2018 - 2019*

MBG Bravo! Award Motorola Mobility LLC
Organisational level individual recognition award, for my contributions in Virtual A/B updates. *Aug - 2020*