

# PAVAN KUMAR RAJA

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## SUMMARY

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Highly capable and technically sound seasoned Software Engineer with 5+ years of experience creating and building solutions that scale to support millions of users daily. Adept at analyzing relevant information to guide products from conception to implementation. Well-versed at building software systems, making improvement suggestions, collaborating with analysts and designers, and making sure projects are completed on time.

## EDUCATION

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**Arizona State University** Tempe, AZ  
*Master of Science in Computer science. GPA – 3.78/4.0* Anticipated graduation 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

## SKILLS

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**Languages:** Python, C++, C, Java, JavaScript.

**Frameworks and technical skills:** PyTorch, reactJS, Android, Git, deep learning, Natural Language Processing.

**Core Competencies:** Process Improvement, Cross-Functional Collaboration, Data Analysis, Oral and Written Communication, Organizational Skills, Time Management.

## EXPERIENCE

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**Software Engineer - Motorola Digital Account (MDA)** August 2020 – July 2021  
*Motorola Mobility LLC* Bangalore, India

- Secured web communication for MDA involving prototyping, architecture design according to OWASP standards, and multiple review sessions to eliminate risk across thousands of transactions.
- Designed instant payment methods for MDA (scan and gesture) involved prototyping, third-party verification, and development.
- Built a secure storage library on the android system to securely save logs, application metrics, and credentials reducing the risk of Privacy information leak during logs/metric upload and enabling biometric login.
- Responsible for reviewing code of other developments and applications in reactJs and Android to aid other areas of MDA to support rapid experimentation and development.

**Software Engineer - Over-The-Air updates** January 2018 – July 2020  
*Motorola Mobility LLC* Bangalore, India

- Brought up virtual A/B updates on Motorola Android devices, reducing memory footprint by 40% and increased software update uptake rate by significant margin.
- Built suite of python scripts to extract prerequisites, analyze update mechanisms, and monitor software update state in virtual A/B devices, increasing efficiency of system architecture design process for new products.
- Led update generation architecture design and development, moved to object-oriented parallel processing architecture including support for multiple vendors and saving 30% in computational resources on build servers.
- Automated critical software update for Verizon carrier by leveraging Motorola's context awareness ML engine and pushing security update rate to 98% on Verizon devices.

**Associate Software Engineer** July 2016 – December 2017  
*Motorola Mobility LLC* Bangalore, India

- Brought up seamless software update architecture into Motorola update devices and reduced return device margin by 90% and increased OS update rate from 70% to 90%
- Investigated latest advancements in compression techniques and integrated them into difference generator, resulting in package size reduction by 20% and cloud storage costs for each update by a significant margin.
- Contributed to bringing up block-based updates on UFS devices allowing Motorola android devices to have plasticity in partition layouts

## Academic Projects

*Github*

- **Instruction Paradigm - An alternative to crowd sourcing:** Experimented prompt engineering on SOTA NLP models (GPT3 and T0\_pp) to validate their capability to generate GLUE datasets (QQP and MNLI), and evaluated results on an NLP pipeline built using SentenceBERT.
- **RealismArtGan:** Experimented with CycleGAN architecture to translate real-life images to realism art style images and vice-versa and evaluated results using likeness score (LS) to gauge Creativity, Inheritance, and Diversity of generative network.

## AWARDS AND RECOGNITION

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### Motorola Team Excellence Award

*Recognition for design and implementation of seamless updates and 5G mod OTA.*

Motorola Mobility LLC

*2018 - 2019*

### MBG Bravo! Award

*Organisational level individual recognition award, for my contributions in Virtual A/B updates.*

Motorola Mobility LLC

*August 2020*