Nikhil Gandudi Suresh

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EDUCATION

University of California San Diego, Master of Science — Sep 2023 - Mar 2025
Electronics and Computer Engineering, **Signal and Image Processing**
Relevant Coursework: Image Processing, Computer Vision, Biomedical Imaging

National Institute of Technology Karnataka, Surathkal, Bachelor of Technology — 2016 - 2020
Electronics and Communication Engineering — 9.3/10 GPA

SKILLS

Programming Languages	Python, C, C++, JavaScript/TypeScript
Other	MATLAB, PyTorch, Git, LaTeX, Deep Learning, Algorithms, Image Processing

EXPERIENCE

Samsung Semiconductors India Research — Bengaluru, India
Associate Staff Engineer - CMOS Image Sensor Algorithm Team — *Apr 2023 - Aug 2023*

- Led algorithm and firmware development of novel data compression for image sensor's OTP (One Time Programmable) memory which resulted in 22% higher data storage in the same silicon area.
- Successfully modeled parts of image processing pipeline which was used as a reference to validate the hardware.

Samsung Semiconductors India Research — Bengaluru, India
Engineer - CMOS Image Sensor Algorithm Team — *Aug 2020 - Mar 2023*

- Developed and implemented a novel low-power, low-resolution motion detection algorithm for Bayer images. Conducted thorough testing and evaluation, resulting in one of the first low-cost CMOS image sensors supporting motion detection in Always-On (AON) mode.
- Revamped sanity checking of image sensor operating modes by automating the process, resulting in reduction of testing time by 85%.

CampK12 Technologies Pvt. Ltd. — Remote
Curriculum Development Intern — *May 2020 - Aug 2020*

- Created and structured Machine Learning curriculum targeting students from grades 8 to 12.
- Delivered 40 impactful lessons and projects, 26 of which have been integrated into the ongoing curriculum.

PROJECTS

Transliteration of English Text to Hindi - Built a transliteration engine with PyTorch. Employed Encoder-Decoder architecture with attention using LSTM cells. Achieved validation accuracy of 91%.

Bayer Image Viewer - Built a custom RAW Bayer image viewer using Python for Samsung engineers, used by 50+ engineers across algorithm development and post-silicon validation teams.

PUBLICATIONS

Nikhil G S, P. Pandey, M. Hota and M. Goel, "Efficient Compression Technique For Large Size Binary Sparse Matrix Using Modified Run Length Encoding For Memory Constraint Embedded Systems," 2023 Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE), Bengaluru, India, 2023, pp. 916-921 [(Link)](#)

LEADERSHIP

- Industry Liaison, the Graduate Student Council at UC San Diego — *Oct 2023 - Present*
- Head of E-Cell, the Entrepreneurship Club at NITK Surathkal — *Mar 2019 - Mar 2020*