

# Jinendra Malekar

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## EDUCATION

### University of South Carolina

*PhD in Computer Engineering*

Columbia, South Carolina, USA

*January 2025 – Present*

### University of South Carolina

*Master of Science in Computer Science*

Columbia, South Carolina, USA

*August 2023 – Present*

## PUBLICATIONS

- **LLMPi: Optimizing LLMs for High-Throughput on Raspberry Pi.** M. Ardakani, J. Malekar, R. Zand  
Presented at the 2nd Workshop on Efficient and On-Device Generation (EDGE), **CVPR 2025, Nashville, Tennessee.** [\[paper\]](#) 2 April 2025
- **PIM-LLM: A High-Throughput Hybrid PIM Architecture for 1-bit LLMs.** J. Malekar, P. Chandarana, M.H. Amin, M.E. Elbitty, R. Zand [\[paper\]](#) 31 Mar 2025
- **Matmul or No Matmul in the Era of 1-bit LLMs** J. Malekar, M.E. Elbitty, R. Zand [\[paper\]](#) 28 Aug 2024

## PROFESSIONAL EXPERIENCE

### Graduate Research Assistant (Research Advisor: Dr. Ramtin Zand)

*ICAS LAB, University of South Carolina*

- Developing highly quantized LLMs/VLM's for Raspberry Pi and edge devices
- Designing hybrid analog/digital accelerators for ultra-low-power AI inference
- Research on 1-bit LLM architectures and their performance trade-offs

## DEVELOPMENT EXPERIENCE

### Research Specialist

*Artificial Intelligence Institute Of South Carolina*

August 2022 – July 2023

*South Carolina, USA*

- **MDiabetes App:** Developed a comprehensive mobile app for Prisma Health to aid in monitoring type-1 diabetic patients. **[ MongoDB, ReactNative, Node.js, AWS, Flask ]**
- **Disaster Record:** Utilized real-time Twitter data to understand better people's need for shelter, food, and healthcare to enhance disaster response. **[ React.js, Node.js, Flask ]**
- **BMW Dashboard:** Collaborated with BMW Greenville/Fraunhofer plant's material planners to create a customized dashboard for inventory management. **[ React.js, Firebase, Fast API, SQL ]**