KEVIN MOSES KOTHAPALLI

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EDUCATION

Cleveland State University — Cleveland, OH

Master of Science, Computer Science — *Expected December 2024*

Hyderabad Institute of Technology and Management — India

Bachelor of Technology, Electronics and Communication — *2021*

Research Assistant, IoT Research and Development

PROJECTS

- Implementation of MQTT Mosquitto Message Broker for Secure Data Transmission in IoT. *(Feb 2021)*
  - *Led a team of three that designed and implemented an open-source MQTT message broker using Raspberry Pi and NodeMCU.*
  - *Security was improved by adding AES encryption.*
- Implementation of Django Framework on the IoT Node. *(June 2021)*
  - *Led a team of three that developed a real-time data hosting service for research that maintained data from multiple sensors using Django.*
  - *Utilized Django channels and WebSockets.*
- Real-Time Infant Health Monitoring System using IoT.
  - *Led a team of six that created and executed a comprehensive health monitoring system. This system tracked various parameters such as body temperature, pulse rate, wetness, cry patterns, and room/incubator humidity levels. Additionally, we incorporated alarm conditions that were programmed to notify parents' Android devices/smartphones with live video streaming.*

RESEARCH EXPERIENCE

- Teaching Assistant at Student Skill Development Center (SSDC R&D) (HITAM). *(Feb 2019 - Jan 2021)*
  - *By teaching, designing, and executing projects for various project expos, I was able to cultivate an interest in Embedded Systems and Internet of Things among students. As a result of our endeavors, we won prizes and accolades at the national level.*
- Member of Academic Committee (HITAM). *(April 2019 – April 2020)*
  - *Helped the college in making student-centric decisions involving labs, curriculum, examinations.*
- Exposure to Industrial IoT, Cyber-physical systems and calibration, research, privacy-friendly problem-solving methods in IoT, IoT compatible subset of machine-learning techniques and algorithms and predictive filters, oneM2M standards, and effect of aging on sensors at Signal Processing and Communications Research Center (SPCRC), IIIT Hyderabad. *(Jan 2020)*

CERTIFICATIONS

- Introduction to Aerospace Engineering: Astronautics and Human Spaceflight from MIT. *(Aug 2020)*
- Cybersecurity for Critical Urban Infrastructure from MIT. *(July 2020)*
- Unlocking Information Security from Tel Aviv University, Israel. *(July 2020)*
- Linux for Developers by The Linux Foundation. *(July 2020)*
- Introduction to Computer Science and Programming using Python from MIT. *(Mar 2020)*
- Conceptual Design from Engineering Projects In Community Service at Purdue University.

SKILLS AND INTERESTS

- **Technologies/Frameworks**: Linux kernel, Git, Vim, System Programming, Internet of Things, Wireless Sensor Networks, Embedded Systems and Software, RFID Applications, GPS Devices, GSM, Agile Project Management, MATLAB.
- **Languages**: C, Python, Java, MicroPython, x86 Assembly.
- **Mathematics:** Logic, Trigonometry, Discrete Mathematics, Linear Algebra, Differential Equations, Advanced Calculus (eg. Laplace transforms, Beta and Gamma functions, Vector Differentiation and Integration), Statistical Methods, Complex Analysis, Fourier Analysis, Partial Differential Equations, and applications.
- **Physics**: Classical Mechanics and Fluid Mechanics, Wave Mechanics, Thermodynamics, Electricity and Magnetism, Semiconductor Electronics, Modern Physics.

Last updated: 03-09-24