Sofia Panuganti

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EDUCATION

University of Maryland, Baltimore County — Baltimore, MD
Master of Science, Computer Science — Expected Graduation: August 2023

- 3.675/4.0 GPA
- **Relevant Coursework:** Advanced Operating Systems, Design and Analysis of Algorithms, Advanced Computer Architecture, Data Visualization, Malware Analysis

Jawaharlal Nehru Technological University — TG, Hyderabad, India
Bachelor of Technology, Computer Science and Engineering — June 2021

- 3.72/4.0 GPA

SKILLS

Programming Languages: Java, Python, C++, C, C#, MATLAB
Web Development: JavaScript, ReactJS, HTML, CSS, Bootstrap, Node.js, Express.js
Operating Systems: Windows, Linux, macOS
Database Management: SQL, MySQL, MongoDB
Tools & IDEs: Visual Studio Code, Eclipse, IntelliJ IDEA, PyCharm, Jupyter Notebook
Software Development: Object-oriented programming, data structures, algorithms, version control using Git

PROJECTS

Image Texture Synthesis using Graphcut — May 2022

- Independently conceptualized and executed an advanced image texture synthesis project using Graphcut techniques in Python, utilizing Git for version control and Jupyter Notebook for code organization
- Demonstrated strong problem-solving skills by implementing the Ford-Fulkerson algorithm to stitch patch regions from sample images, resulting in seamless output images with high visual fidelity

Distributed System with Multicasting and Locking — December 2021

- Successfully implemented Berkeley's algorithm for clock synchronization, causal-ordered multicasting with vector clocks and distributed locking algorithms to protect a shared file in a distributed system
- Developed precise communication and synchronization between processes in a distributed system using C++ on Linux, employing multi-threading, socket programming, and file I/O operations

Encoder Decoder Model for Text Summarization — June 2021

- Collaborated with team members to implement deep learning sequence-to-sequence techniques using Pandas and Keras, resulting in an advanced text summarization model with a 92% success rate
- Exhibited effective communication in presenting project updates and integrating feedback from the team

WORK EXPERIENCE

Graduate Student Assistant, *UMBC, Department of CSEE* — January 2022 – Present

- Assisted and evaluated coursework for over 200 students in the course Principles of Computer Security, demonstrating expertise in virtualization technologies such as VirtualBox as well as Linux and Windows OS
- Provide academic support to over 60 undergraduate students by clarifying grading questions

Teaching Assistant, *JNTU, Department of CSE* — January 2019 – June 2019

- Facilitated individualized tutoring and problem set instruction for 25 students in Computational Mathematics course, utilizing MATLAB and Python, resulting in a 10% increase in class grade

VOLUNTEER EXPERIENCE

Vice Chair, *Hyderabad Youth Assembly* — December 2018 – December 2019

- Led and managed a team of 25 to successfully organize and execute United Nations SDG goals, positively impacting 1,000 underprivileged individuals and showcasing strong leadership and management skills