Sai Durga Rithvik Oruganti

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EDUCATION

- **University of South Carolina** Columbia, SC

  Bachelor of Science in Engineering - B.S.E Computer Engineering *May 2024*

  Major GPA: 3.963; Overall GPA: 3.949

EXPERIENCE

- **Artificial Intelligence Institute of UofSC** *May 2022 - Present*

  Research Assistant

  - **Image & Video Processing:** Working on creating tools in Python that analyze various videos of infants to detect if they are interacting with an object or person. This data is used to determine how the activity is impacting their cardiovascular system.
  - **Analysis:** The analysis utilizes libraries in Python such as OpenCV, MediaPipe, and Scikit Learn.

- **Laboratory for Integrative Neuroscience Analysis at UofSC** *May 2022 - Present*

  Research Assistant

  - **Signal Processing:** Assisted in determining benefits and drawbacks of using ECG simulation models based on reaction-diffusion, oscillator, and transform-based models.
  - **Simulation:** Using probability functions, simulated ECG signal and the various parts it is composed of.
  - **Reinforcement Learning:** Utilized a reinforcement learning model made using Scikit Learn to extract the parameters for different parts of an ECG signal.

PROJECTS

- **Audio Convolution:** Python project using SciPy. Using an impulse response of a space and an audio, the audio in a particular space can be generated.
- **Molecule Simulation:** A simulator developed using Python for simulation the evolution of multiple molecules in a closed space.

OTHER ACTIVITIES

- **Membership Chair Association for Computing Machinery:** Helped recruit students, attend on-campus events, coordinate with guest speakers, and host weekly meetings.
- **Peer to Peer Mentor:** Mentor for two Computer Engineering students. Assist students in attaining their desired academic goals.

SKILLS

- **Programming:** Python, MATLAB, C/C++, Bash, Java, R
- **Tools/Libraries:** PyTorch, Scikit Learn, Pandas, SciPy, Matplotlib, Seaborn, NumPy, Pygame, Tkinter, Microsoft Office Suite, Inventor, Raspberry Pi, Arduino