SUCHIR REDDY PUNURU

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Education

Education: Bachelor of Technology in Artificial Intelligence, Mahindra University, class of 2025

Relevant course work: *Introduction to CS, Artificial Intelligence and Humanity, Data Structures, Machine Learning and Python, Artificial and Computational Intelligence, Theory of Computing, Digital Logic Design, Computer Architecture, Numerical Methods, Design Thinking*

CGPA: 6.94/10 (till 3rd semester)

12th Grade, Royal Concorde International School(CBSE), Bengaluru May 2021
Percentage: **92.4 %**

10th Grade, Vibgyor High School (ICSE), Bengaluru June 2019
Percentage: **91.6 %**

Projects

Python based Dicom Receiver

Medical images are exchanged using dicom protocol and dicom image format. This project involved the building of a dicom images receiver which receives images from modalities(CT, MRI,X-Ray machines).

- Using pynetdicom and pydicom built a dicom receiver to receive dicom images over LAN.
- Using pywin32 built a windows service for the dicom receiver
- Wrote test plan and executed successfully

Satellite Precise Orbit Propagator(SPOP)

One of the primary requirements for orbit analysis is the ability to predict future or past locations of a satellite given its current location, the equation for the velocity of a body in orbit is easy to derive, however the corresponding equation for the location is not integrable so, numerical methods have to be used to approximate the location. My involvement in the project entailed the following:

- Mathematical modeling of orbits using Matlab and Julia
- Creating an SPOP in C using Runge-Kutta-Fehlberg7(8) with adaptive step size calculation
- Interpolation of positions between calculated time intervals using Lagrange, Hermit and Cubic Spline Interpolations.
- Consolidation of the above specified methods into an application with a Graphical User interface using ElectronJS.

Internship

Medpac Systems June 6th-Aug 14th 2022
Worked on Python based Dicom Receiver Project

Skills

Computational tools/skills: Linux, Mysql, Apache, PHP, C/C++, Python (Numpy, Pandas, Matplotlib/Seaborn, Scikit-learn), Java, Javascript (jQuery, Vue, NodeJS, ExpressJS, Vite), Lua, Matlab/Octave, Julia, Latex, Markdown.
Design software: AutoCAD, Blender, Canva, Figma, Libre Office.

Awards and Achievements

- Received Mahindra University Institute merit scholarship for the year 2022- 2023
- Participated in Indian Army Hackathon Sainya Ranakshetram 2.0 (https://block.cyberpeace.org/docs/841fe35d2dfa535b1df641e5b234d3b0b0c365caad9581675e424cddf59efc48)
- Created and demonstrated a retro gaming station using retro-pie flashed onto a raspberry pi.

Interests/Extra-curricular activities

Sports: Basketball, Table Tennis
Interests: Science Fiction novels and Comics