PAVAN RAJKUMAR MAGESH

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SUMMARY

- Organised and motivated student who practises proper planning and time management to get work done.
- Possesses great communication skills, is a quick learner and keen listener, and not to mention, an early riser.
- Interested in machine learning, data science analytics, applied AI for healthcare and relevant research fields.

TECHNICAL SKILLS

- Programming languages - SQL, Python, Java, C#, C, Shell
- Data preprocessing, visualization and extrapolation using relevant python tools and packages.
- Google cloud platform architecture, engineering and deployment, and other similar cloud platforms.
- Machine learning algorithms and pipe-lining with implementation using relevant python libraries.
- Web technologies – JavaScript, PHP, MySQL database.

EDUCATION

BE Computer Science and Engineering — **CMR Institute of Technology**
CGPA - 8.77 (Top 10% of class of 2021) — *2017 to present*

High School — **Narayana Educational Institutions**
Grade 12 - 89.5% (PCMC - Karnataka State Board) — *2013-2017*
Grade 10 - 10.0 CGPA (Central Board of Secondary Education)

RELEVANT COURSEWORK

- Data structures and Algorithms
- Database Management Systems
- Machine Learning
- Advanced Java Programming
- Python Application Programming
- .NET Application Development
- Object Oriented Concepts
- Software Engineering
- Computer Networks

ACHIEVEMENTS AND POSITIONS OF RESPONSIBILITY

- Selected for Semi-finals of India Innovation Challenge Design Contest totaling three idea selections – 'Vehicle Footpath Violation Detection', 'Vehicle to Vehicle Collision Avoidance', and 'M-Bot: Medical Segregation Robot'
- 2^{nd} Prize Winner at Pravega Sustainability Challenge held at the Indian Institute of Science
- Appraisals for 3rd Semester mini-project for VTU results retrieval and analysis project
- Participated in various Hackathons at college and inter-college and national level.
- Student Coordinator at Google Developers Student Club – was responsible for conducting requirement analysis and building mobile solutions for local businesses around college.
- Core organizer for Google's Student Mobile Developer Fest held at CMR Institute of Technology attended by over 500 students.

CERTIFICATIONS

(Links to certificates can be found on LinkedIn)

- Architecting with Google Compute Engine Specialization (5 courses) - Coursera
- Deep Learning Specialization (3 courses) - Coursera
- Machine Learning - Coursera
- AI for Medicine Specialization (3 courses)- Coursera

PROJECTS

- **VTU Results Scrapper** - Developed a program to web scrap all semester results of CMRIT students using pure shell. Achieved roughly 4x faster performance than Python's BeautifulSoup and is currently in use in the Computer Science Department.
- **VTU Result Management System** - Developed a result management system for the analysis of student performance in their internal and external exams. Developed using technologies like PHP, MySQL and web design languages.
- **Library Stock Verification and Management System** - Developed a customised program to ease the stock verification procedure of the CMRIT library every semester. Developed interfaces between OCR scanners and databases. Built using NodeJS, SQL, and web design languages.
- **Prediction of Parkinson's Disease using Neural Networks** - Used machine learning and transfer learning techniques to diagnose Parkinson's Disease using brain scans and speech signals. Utilised machine learning models such as CNNs, SVMs, and random forest classifiers. Research paper submitted to *Computers in Biology and Medicine* journal.
- **Chest Disease Classification** - Made a neural network model to classify 14 classes of chest diseases by analysing Chest X-Ray scans from patients. Achieved high accuracy of 95.7% for the task by tuning and testing various hyper-parameters which gave a profound understanding of neural networks.
- **Brain Tumour Auto-segmentation** - Developed a deep neural network to segment brain tumours from a given MRI scan. Used various computer vision python libraries like OpenCV and Pillow.
- **Machine Learning mini-projects** - Have developed and implemented various machine learning algorithms on corresponding datasets as part of the online courses I have taken. Carried out data preprocessing and analysis on database sets. Some of the algorithms include - Regression, Decision Trees, Bayesian Methods, Clustering techniques, Dimensionality Reduction, and Artificial Neural Networks.
- **Low Cost RPM meter accessory for automobiles** - Created a low cost RPM meter using Arduino micro-controller programmed using C. The device can be attached independently to any vehicle by connecting its cables to the spark ignitions of an engine.