Akash Perni

College Park, MD- 20740 | aperni@umd.edu | +1(240-462-5014) | https://www.linkedin.com/in/perni-akash-204180197

EDUCATION

University of Maryland - College Park ***College Park, MD***
Master of Engineering in Software(SE), GPA 3.9 *Expected May 2025*
Courses**:** Software engineering, Data Science, Analytics for Decision Support

Vasireddy Venkatadri Institute Of Technology (VVIT) ***Guntur, India***
B.Tech, Information Technology(IT), GPA 8.91 *Aug 2019 – Apr 2023*

- First Class Honors, top 5% of the class

Courses**:** Python, Java, Operating systems, Data Structures, Databases, Data Science, Machine Learning Algorithms

SKILLS

Programming: Python, SQL, Data structures, Oops
Python Packages: Pandas, NumPy, Matplotlib, Seaborn, Statsmodels, SciPy, Tensorflow, Pytorch
Data science Skills: Predictive modeling, Data mining, Data Transformation, analysis and visualization, Machine Learning, ETL
Databases: MySQL, MongoDB (NoSQL)
Tools: Power BI, Tableau, GitHub, PyCharm, Jupyter Notebook, Eclipse, Microsoft Excel
Certifications: AWS Academy Cloud Foundations

PROFESSIONAL EXPERIENCE

Student Tutor *Feb 2024 - Present*
University of Maryland - College of Computer, Mathematical and Natural Sciences *College Park, MD*

- Conducted over 23 one-on-one tutoring sessions for undergraduate students enrolled in CMSC320 Introduction to Data Science and CMSC422 Introduction to Machine Learning courses, resulting in a 90% student satisfaction rate.
- Facilitated the understanding of complex concepts, algorithms, and techniques by assisting students with data pre-processing, statistical analysis, machine learning models, and evaluation metrics.
- Collaborated with course instructors to develop and refine supplementary materials, including 9 practice exercises and 4 study guides, resulting in enhanced student comprehension and retention of course material, as evidenced by an 18% improvement in exam scores and a 21% decrease in withdrawal rates compared to previous semesters.

AWS Cloud Internship Mar 2022 - May 2022
All India Council for Technical Education(AICTE) *AP, India*

- Oversaw the installation of a PHP application on an Amazon EC2 instance, guaranteeing smooth operation and performance and enabling social science academics to access worldwide development statistics.
- Engineered a MySQL database by importing an SQL dump file, resulting in a 12% increase in system speed and enabling seamless data storage and retrieval for the PHP application.
- Streamlined maintenance and upgrades by organizing the setup of application settings in the AWS Systems Manager Parameter Store, improving scalability and management.

ACADEMIC PROJECTS

Crop recommendation engine *Aug 2022 – Nov 2022*

- Assembled and guided a team in creating an Intelligent Crop Recommendation System by assessing key factors such as temperature, rainfall, humidity, soil pH, and nutrient levels (N, P, K) using a historical dataset of the last 25 years.
- Collaborated with local farms, analyzed 8000+ instances, and applied Gaussian Naive Bayes for enhanced accuracy.
- Achieved 89% accuracy, showcasing quality recommendations, while enhancing efficiency through optimized code and algorithms, significantly reducing system response time for faster recommendations.
- **Skills Used :** Python, pandas, scikit-learn, NumPy, Gaussian Naive Bayes, stream lit.

Handwritten manuscript recognition *Dec 2022- April 2023*

- Participated in crafting a Handwritten Manuscript Recognition solution accomplished at precise identification of handwritten digits, English alphabets, and textual content.
- Utilized 100,000+ image dataset, including digits, alphabets, and text. Executed integrated CNN-LSTM architecture, elevating precision and efficiency for precise, contextual handwritten text recognition.
- Delivered 91.4% accuracy via CNN and elevated to 93.2% with LSTM on benchmark dataset. Achieved a 15% reduction in false positives.
- **Skills Used:** Python, Tensor Flow, Keras, OpenCV, CNN, LSTM, Tkinter.

HONORS and AWARDS

- Chairman's club, member (VVIT) *Aug 2021 – Apr 2023*
- Academic Excellence Award (VVIT) *Aug 2021- May 2022*

INTERESTS

- Organized diverse undergraduate tech events while staying updated through continuous tech article engagement.
- Participated in inter-university Cricket and volleyball matches.