Srikanth Badavath

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Summary

As a Data Science Associate with 1 year of experience, I leverage Python and SQL to craft end-to-end machine learning solutions. My interests extend to natural language processing and Prompt Engineering where I've explored techniques like LLMs and delved into Generative AI. Through collaborative projects, I excel at uncovering insights that drive innovation. With an AWS Certified Solutions Architect Associate certification, I manage cloud resources to deploy scalable ML solutions effectively. Excited to apply my skills to real-world challenges, I aim to make tangible contributions in the dynamic field of data science.

Education

Virginia Tech — Blacksburg, VA
Master of Science in Computer Science | GPA: 3.90 / 4.0 — *Jan. 2025 – Present*

Lovely Professional University — Phagwara, India
Bachelor of Technology in Computer Science and Engineering | CGPA: 8.37 / 10 — *Aug. 2020 – Jun. 2024*

- *Specialization: Data Science (Machine Learning and Artificial Intelligence)*

Experience

Data Scientist Associate — Feb. 2024 – Dec. 2024
Blenheim Chalcot

- Led the integration of GenAI technologies into enterprise products such as IntentPro, Guidiq, and Skill Coins, enhancing automation and user interaction.
- Improved backend infrastructure by transitioning from Chroma DB, significantly boosting system stability and performance.
- Built a virtual Call AI platform for Agilisys leveraging OpenAI Whisper for speech-to-text, ElevenLabs for text-to-speech, and OpenAI APIs for dialogue generation and database interactions.
- Addressed and mitigated prompt injection attacks affecting the OpenInterpreter tool, strengthening platform security.
- Designed scalable AI-driven services that seamlessly integrate into Agilisys' digital ecosystem and aligned with enterprise-grade performance standards.
- Gained advanced hands-on experience with AWS services such as Lambda, EC2, and S3, optimizing cloud deployment workflows.
- Collaborated with multi-disciplinary teams and used GitHub extensively for version control, issue tracking, and release management.

Data Scientist Intern — Jun. 2023 – Feb. 2024
Blenheim Chalcot

- Designed conversational AI systems using LLaMA2 and OpenAI chat models for accurate, context-aware dialogue.
- Built GPT CODE UI using the GPT code interpreter with Jupyter kernels for smart code execution and debugging.
- Automated package installation and implemented self-correcting logic to handle faulty code inputs.
- Strengthened Prompt Engineering and NLP capabilities through applied work with large language models.
- Deployed Generative AI applications on AWS and created thorough project documentation.

Projects

HealthBotML — *Python, JavaScript, HTML, CSS*

- Developed HealthBotML, an AI-powered healthcare companion with features like BMI calculator, virtual AI chatbot, disease precautions, and nutritional guidance.
- Implemented Flask for backend logic and Jinja2 for templating; used HTML, CSS, and JavaScript for responsive frontend development.
- Used machine learning models such as Decision Tree, Random Forest, Gradient Boosting, and Multinomial Naive Bayes for disease risk prediction.

- Engineered user input validation and model inference pipelines for real-time predictions.
- Enabled multilingual support in chatbot and optimized UI for mobile and desktop platforms.

CodeLlama: AI Tutor Chatbot *Python, Streamlit, Meta CodeLlama, DeepInfra API*

- Developed CodeLlama, an interactive AI-powered coding assistant that facilitates real-time code generation and discussion through a web interface.
- Used Python and Streamlit to build an intuitive frontend; integrated HTML/CSS for interface enhancements.
- Leveraged Meta's CodeLlama LLM through DeepInfra API to interpret prompts and produce context-aware code snippets.
- Implemented backend logic for handling user input, communicating with the LLM, and managing secure API keys.
- Enabled text-to-code translation, debugging insights, and enhanced developer productivity through natural language interaction.

Used Phone Price Predictions *Python, Machine Learning*

- Built a predictive model using 2000 used mobile phone listings with 21 features including brand, RAM, processor, and battery.
- Performed EDA and applied ML algorithms: Logistic Regression, Decision Tree, Random Forest, and XGBoost.
- Achieved 90% accuracy using tuned XGBoost; identified RAM and brand as dominant pricing factors.
- Provided data-driven insights to help resellers and consumers make informed pricing decisions.

Serverless Website Deployment *AWS Lambda, Docker, API Gateway*

- Developed a serverless website architecture using AWS Lambda, API Gateway, Docker, and DynamoDB.
- Integrated CloudFront CDN and enabled auto-scaling for performance optimization and reduced latency.
- Showcased proficiency in AWS services and Docker-based deployment pipelines.
- Successfully deployed a scalable and cost-efficient cloud-native web application.

Research Publications

Forecasting Prices Using ML Techniques:
Special Reference to Used Mobile Phones *Jun. 2023 – Sep. 2023*
Published in IEEE Explore, Presented at ICAISS 2023 View Paper

- Developed machine learning models to predict price ranges based on mobile phone specifications.
- Conducted data preprocessing, feature engineering, and hyperparameter tuning.
- Used supervised ML algorithms: Logistic Regression, Decision Trees, Random Forest, and XGBoost.
- Identified the most impactful features influencing pricing strategies; RAM emerged as a key factor.
- Achieved 90% accuracy using the tuned XGBoost model.
- Performed model evaluation using accuracy metrics and feature importance plots.
- Provided actionable insights for both manufacturers and consumers in mobile pricing strategies.
- Highlighted the critical role of clean data and optimal feature selection in model performance.
- Demonstrated real-world applicability of ML in solving pricing prediction problems.

Certifications

- AWS Certified Solutions Architect - Associate (SAA-C03), Dec 2023
  Verify Credential
- Google Cloud Certified Professional Cloud Architect
- Advanced Python Programming (E-box)

Technical Skills

Languages: Python, Java, C, SQL, JavaScript, HTML/CSS
Web Technologies: Node.js, React, Flask, FastAPI, WordPress, Material-UI
Data Management: MySQL, MongoDB
Platforms: Docker, PyCharm, Tableau, PuTTY, AWS, Azure, GCP, Android Studio, VS Code, Jupyter
Libraries: pandas, NumPy, Matplotlib
Power Skills: Team player, imaginative, critical thinker, creative