RENUGOPAL SIVAPRAKASAM

+1 940 629 9100 • _____ • _____ • _____ • _____ • Open to Relocation

Leveraging **over 5 years** of experience in software engineering and machine learning. Motivated AI enthusiast eager to contribute my expertise in AI, machine learning, and Python programming to develop impactful, real-world applications

SKILLS

Programming Languages and Databases: Python, Postgresql, SQL, NoSQL, Javascript, C, C++, Java, MongoDB, MySQL.
Frameworks: Django, Fast API, Flask, Node JS, React, TensorFlow, Scikit-Learn, OpenCV, Spark, jQuery, GenAI, Large Language Models (LLMs), Matplotlib, PySpark, REST API.
Tools and Technologies: O1, Llama, o3, deepseek, AWS, GCP, S3, EC2, DataProc, Docker, Cassandra, Kubernetes, Linux, Machine Learning, AI, Data Analytics, Queues, Redis, Neural Networks, Jenkins, Hadoop, Git, Microservices, Pub-Sub.
Other: Team Leadership, Communication, Scrum, Agile, Project Management, Data Wrangling, Prompt Engineering.

EXPERIENCE

Senior Software Engineer/Team Lead - _____

- **Team Leadership** - Led the development of AI-powered analytics platforms using Python, FastAPI, and TensorFlow to deliver real-time insights, which helped earn Forbes top 100 innovative company status and secure Series B funding.
- **Software Architecture** - Orchestrated a multi-tenant software architecture overhaul that drove a revenue surge exceeding $2M in its first year, remarkably streamlining data processing and significantly enhancing overall operational efficiency.
- **System Optimization** - Optimized PostgreSQL queries and caching to cut data latency by 60% and integrated TensorFlow-based ML models into dynamic analytics dashboards to boost real-time processing and customer satisfaction.

Senior Software Development Engineer - _____

- **AI Platform** - Developed an AI-driven patient management platform for leading pharmaceutical clients using Python, Django, and AWS to deploy clustering models that accurately predicted patient adherence and improved clinical outcomes.
- **Database Optimization** - Refinined ORM queries and implemented advanced machine learning algorithms, achieving a 50% reduction in API response times while enhancing security with robust multi-factor authentication.
- **System Monitoring** - Implemented comprehensive system monitoring by integrating the ELK stack with AI-driven log analysis, dramatically reducing incident detection to under one minute and ensuring high platform availability and reliability.

Full Stack Developer - _____ -

- **Python Expertise** - Spearheaded development of 'Typewiser,' an AI-enhanced grant application tool built with Python, Django, and JavaScript, automating text analysis and proposal customization to reduce creation time by 70%.
- **AI Automation** - Developed and integrated a machine learning template recommendation system that analyzed historical data to optimize grants and further reduce proposal creation time by 70% and help secure over €10M in public funding.
- **DevOps Proficiency** - Led critical DevOps initiatives by designing CI/CD pipelines with Jenkins, GitHub Actions, Docker, and Kubernetes, accelerating deployment times by 50% and significantly increasing overall release frequency.

Associate Software Developer/Freelancer _____ -

- **IoT Engineering** - Engineered a full-stack IoT gateway with C, Python, and MQTT for WMBus, BACnet, and Zigbee devices, scaling throughput to 1M packets per second using open-source tools like Mosquitto to deliver reliable messaging.

PROJECTS

_____ - Fidus Writer is an online collaborative editor especially made for academics who need to use citations and/or formulas. Leveraged Python, Django, Tornado, and JavaScript to enhance this famous open-source software.
_____ -Developed "Eventique," an AI-powered event planning platform by integrating LLMs like Gemini. Leveraged HuggingFace libraries and pre-trained models for implementing an intelligent recommendation engine, providing tailored vendor and scheduling suggestions for event planners. Implemented the system with Python, Django, React, and GCP, showcasing expertise in LLM integration and product development.
_____ - Led development of a high-accuracy accident analysis system handling 7B+ data points. Utilized PySpark, MLib, GCP architecture with Dataproc, Hive, achieving 94% accuracy in predicting severity. Successfully demonstrated using Big data technologies, data pipelines and building models on huge dataset.
_____ - Built a RAG-based semantic search system for restaurant reviews using Sentence-BERT embeddings and Qdrant vector database for efficient similarity search. Integrated Llama-3.2-3B-Instruct for local LLM inference and context-aware query understanding. Delivered personalized recommendations, highlighting expertise in RAG and vector DB.

EDUCATION

Master of Science (M.S.) in Computer Science. GPA: 4.0/4.0 — Aug 2023- Current
University of North Texas — Denton, Texas, USA
Relevant Coursework: Machine Learning, Big Data, Advanced Algorithms, Data Structures, Databases, Operating Systems

Bachelor of Engineering (B.E) in Electronics and Communication. GPA: 3.7/4.0 — July 2014 to July 2018
PESIT South Campus(affiliated with Visvesvaraya Technological University) — Bengaluru, Karnataka, India
Relevant Coursework: Algorithms and Data Structures, Operating Systems, Networking, Embedded Systems, C++