

Amogh Prakash

+91 7019627172 | amogh.p27@gmail.com | linkedin.com/in/amogh-prakash-93b585273 | github.com/Amoghprakash2k4

SUMMARY

Motivated and collaborative Software and Machine Learning Engineer with hands-on experience designing massively scalable systems, architecting distributed data pipelines, and deploying low-latency AI-driven solutions. Skilled in strategic problem-solving, optimizing infrastructure performance, and transforming large-scale data into actionable insights. Thrive in fast-paced, dynamic environments, delivering innovative engineering solutions that drive measurable impact.

EDUCATION

PES University

B.Tech in Computer Science and Engineering

Bangalore, KA

Nov. 2022 – May 2026

TECHNICAL SKILLS

Languages: Python, C++, SQL, C

Frameworks: PyTorch, TensorFlow, scikit-learn, Hadoop, Spark, Kafka

Distributed Computing: Hadoop, Spark, Kafka (big data processing, real-time streaming)

Concepts: Distributed Computing, Information Retrieval, Machine Learning, Large-Scale System Design

Core Competencies: System Architecture, Low-Latency Infrastructure, Scalable Software Design, Model Optimization

PROJECTS

Real-Time Sentiment Streaming System | *Apache Kafka, PySpark, JavaScript*

GitHub

- Built a scalable real-time sentiment system with Kafka and PySpark processing billions of emoji reactions.
- Designed a low-latency distributed Pub-Sub architecture for high-concurrency and seamless client delivery.
- Generated actionable insights and visualized stream vs. batch performance metrics.

Dynamically Voice-Modulated AI Story Generation System | *Python, FastAPI, React-Vite, Git*

GitHub

- Architected scalable microservices enabling emotion-aware storytelling with real-time audio processing and dynamic voice modulation.
- Designed high-availability pipelines leveraging Librosa and FFmpeg for low-latency, resilient streaming.
- Delivered milestones efficiently in a fast-paced hackathon, demonstrating adaptability and strategic thinking.

MCP-TerminalAI: Conversational Automation Agent | *Python, LangChain, Playwright, mcp-use*

GitHub

- Developed a terminal-based conversational AI integrating real-time automation and data retrieval.
- Developed a low-latency agent with LangChain, transforming natural language input into actionable commands.
- Enabled natural language control of tools like DuckDuckGo, Airbnb, and browser automation.

Multimodal Emotion Analysis Using Machine Learning | *Python, scikit-learn*

GitHub

- Built scalable, low-latency models for video/text data with robust, high-performance pipelines.
- Applied supervised learning, hyperparameter tuning, and feature engineering to build scalable, low-latency models for video and text data.

Multi-Pollutant Analysis and Health Risk Assessment(ongoing) | *Python, Pandas, Matplotlib*

GitHub

- Developing a data-driven forecasting system.
- Integrates geospatial visualization and predictive modeling.
- Implements scalable data preprocessing pipelines and model monitoring.

Music Recommendation System | *Python, Collaborative Filtering*

GitHub

- Built a collaborative filtering engine to deliver personalized music suggestions based on user behavior.
- Processed and analyzed large-scale listening data to enhance recommendation accuracy and engagement.
- Optimized system performance and model adaptability using core machine learning principles.

STRENGTHS

- Strategic thinker with proven ability to innovate and adapt in dynamic environments
- Deep understanding in distributed computing, scalable systems design, and machine learning infrastructure.
- Effective collaborator across cross-functional engineering and product teams.
- Committed to delivering high-performance, secure, and reliable software solutions