

# Suhas K M

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## PROFESSIONAL SUMMARY

Versatile engineer with 2 years of experience in AI research, software development, databases, and cloud infrastructure. Expertise in the delivering elegant software solutions across domains. Leverage cutting-edge technologies, to address complex real-world challenges

## EDUCATION

<b>Northeastern University</b> <i>Master of Science in Information Systems, GPA: 3.80</i>	September 2023 - May 2025 Arlington, VA
<b>Visvesvaraya Technological University</b> <i>Bachelors of Engineering in Computer Science</i>	August 2018 – July 2022 Bangalore, India

## EXPERIENCE

<b>Graduate Research Assistant</b> <i>Northeastern University</i>	January 2025 – May 2025 Arlington, Virginia
<ul style="list-style-type: none"><li>• Architected two adaptive attention neural networks, AILA(s) cut training time by 30%, cost by 20%, and improved long range sequence accuracies by 15% against baselines SOTA baselines Transformers, ViTs and LSTMs</li><li>• LSTMs v/s AILA on price forecasting, reduced MSE scores for USD from 15.55→2.85 and wheat from 5245→1536</li><li>• Ablated and pruned AILA to shrink model size 20% and accelerate inference 25% with no accuracy loss</li><li>• Trained AILA-2 to IMDB, achieving 84.3% accuracy with significantly faster training and inference</li><li>• Developed REALM, an augmented reward-model for RLHF that injects explicit relevance signals, boosting reward ranking accuracy by 4% and cutting off-topic generations</li></ul>	
<b>Graduate Teaching Assistant - Data Science</b> <i>Northeastern University</i>	January 2025 – May 2025 Arlington, Virginia
<ul style="list-style-type: none"><li>• Mentored students build ML pipelines and practice MLOps, from data preprocessing to scalable deployments</li><li>• Designed assignments, helping students think critically about data and math further boosting real-world skills</li><li>• Held 40+ teaching hours on regression, classification, and clustering</li><li>• Guided students on hyperparameter tuning, overfitting prevention, and evaluation metrics</li><li>• Crafted containerization templates helping students master Docker and MLOps</li></ul>	
<b>Cloud Engineer Intern</b> <i>Safecast</i>	May 2024 – January 2025 Arlington, Virginia
<ul style="list-style-type: none"><li>• Volunteered to design and document AWS architecture, leading to a significant boost in open-source contributions</li><li>• Optimized AWS costs by analyzing resource utilization, achieving a 15% reduction in monthly cloud expenses</li><li>• Monitored and upgraded PostgreSQL, ensuring RDS versions stayed compliant with AWS support timelines</li></ul>	
<b>Software Engineer</b> <i>Runway Proptech LLC</i>	September 2022 – August 2023 Bangalore, India
<ul style="list-style-type: none"><li>• Led a Python-based AWS Serverless Architecture, cutting API costs by 30% and enhancing API scalability</li><li>• Developed 15+ Spring Boot/MVC and cloud serverless APIs, improving accessibility and ease of use</li><li>• Accelerated ETL pipeline for Salesforce CRM data migration, boosting speed by 35% with a fail-safe design</li><li>• Improved query performance for ACID compliance, reducing latency and enhancing data security</li><li>• Resolved CORS issues and conducted code analysis to improve API security and ensure compliance with standards</li><li>• Boosted Agile and Scrum project efficiency by 20% through strict ticket handling and accelerated task completion</li><li>• Enhanced client retention and reduced churn by 15% with AWS SES for emails triggered based on user activity</li><li>• Increased operational efficiency by 30% through a Tableau dashboard, enhancing data-driven decision-making</li></ul>	

## TECHNICAL SKILLS

**Programming Languages:** Java, Python, SQL, R, Go, Shell, Object-Oriented Programming, Backend, Design Patterns  
**Frameworks/Tools:** Spring, MVC, Microservices, React, FastAPI, Flask, Apache Spark, Kafka  
**Databases:** PostgreSQL, MySQL, MongoDB, NoSQL, Oracle Database, Elasticsearch, Redis  
**Data Science/Machine Learning:** PyTorch, scikit-learn, NLP, MLOps, Data Pipelines, Data Analytics, UNIX  
**Cloud Computing/DevOps:** AWS, Google Cloud Platform (GCP), Azure, Serverless (AWS Lambda), Jenkins, GitHub Actions, CI/CD Pipelines, Oracle, Docker, Kubernetes, Terraform, Prometheus, Grafana, ELK Stack  
**Other Tools:** Git, Linux, Tableau, PowerBI, Agile, Scrum, Data Structures, Algorithms, Project Management

## LICENSES & CERTIFICATIONS

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**AWS Certified Cloud Practitioner (CLF-C02)** | *Amazon Web Services*  
**Databricks Generative AI and Lakehouse Fundamentals** | *Databricks*

## PROJECTS

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- MatchPoint: The Resume Analyst** | *React, FastAPI, AWS ECS, Docker, Llama Model* |  December 2024
- Developed a resume scoring app using React, FastAPI, and Llama models, with Dockerized deployment on AWS ECS for scalability, providing real-time NLP-based feedback and improvement suggestions
- GeoGuard: Global Threat Detection System AI** | *Geospatial Mapping, Kafka, Tableau* |  November 2024
- Designed GeoGuard, a real-time global threat detection app integrating geospatial analytics, AI models, and tools like Kafka and Tableau to monitor geopolitical shifts and display actionable insights on interactive world maps
- D.C SafeHomeSeeker AI - aiXplain** | *Generative AI, Vector Databases, Cloud, Maps* |  | [Blog](#) October 2024
- Won **hackathon** by developing an AI-powered app that aggregates housing data and generates property descriptions using Pinecone and OpenAI, with interactive maps displaying safety and amenities
- Nutrition Tracker Database System** | *SQL Server, Tableau, TSQL, Data Security* |  April 2024
- Developed a Nutrition Tracking System with SQL Server, Tableau dashboards, and secure handling of user-specific dietary and fitness data
- word2vec Modelling** | *NLP, GENSIM, PyTorch, TensorFlow, CBOW, Skip-Gram* |  April 2024
- Developed Word2Vec models with GENSIM, PyTorch, and TensorFlow, optimizing CBOW for analogy tests and cosine similarity while enhancing scalability for large datasets under constrained resources
- Benchmarking CNN Architectures on MNIST** | *CNN, PyTorch, Feature Map Visualization* |  February 2024
- Benchmarked CNN models on MNIST using PyTorch, analyzing Feature Maps, performed Data Augmentation and performance tests across architectures with advanced evaluation metrics
- QueryMaster-AI** | *LLM, Prompt Engineering, LangChain, SQLite, Gemini Pro, Docker* |  January 2024
- Built an AI-powered app integrating Google's Gemini Pro, achieving over 90% accuracy in translating natural language into SQL queries, enhancing data accessibility for non-technical users
- Hotel PricePro** | *Forecasting, Analytics, XGBoost, EDA, Feature Engineering* |  December 2023
- Built a price prediction model for hotel ADR using XGBoost, EDA, and hyperparameter tuning, achieving 71% accuracy and improving performance through feature selection techniques
- LoanGuard AI** | *PyTorch, SMOTE, Model Optimization, Financial Analytics* |  March 2024
- Built a Neural Network with PyTorch for loan default prediction, using SMOTE for balanced datasets and optimizing metrics to improve accuracy and support loan approvals
- Children's DayCare Management System** | *SpringBoot, Java, JDBC, ORM, JavaxMail* |  December 2023
- Built a backend web app to track vaccine schedules for children, integrating JavaxMail for notifications and ensuring HIPAA-compliant data sharing in the VFC program
- Intelligent Waste Management - Research Paper** | *DL, Keras, TensorFlow, Cloud* |  September 2022
- Engineered a smart waste segregation system integrating IoT and Cloud, leveraging deep learning for 83% accurate waste classification, facilitating real-time monitoring and automated alerts via Cloud Services

## LEADERSHIP, VOLUNTEERSHIP & EXTRACURRICULAR ACTIVITIES

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- Organized Tech Meetups and Mentored Underprivileged Students in Python**  
*Northeastern University* October 2023 – November 2024
- Organized multiple student-led tech events to foster knowledge-sharing in AI and programming
  - Collaborated with faculty and student groups to build a better collaborative community with weekly meetings
- Head of Student Developer Club and Soccer Team Captain**  
*Visvesvaraya Technological University* May 2019 – August 2022
- Captained the soccer team to regional finals, enhancing teamwork and leadership skills
  - Organized community service initiatives, including coding workshops
- Community Service Volunteer**  
*Bangalore Rural Development Organization* January 2018 – May 2023
- Organized literacy programs, benefiting over 50 underprivileged students in rural areas
  - Conducted computer literacy workshops focusing on MS Office and basic programming concepts