Varsha Chikkamagaluru Lakshmikanth

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Experienced Software Engineer

EDUCATION

University of Illinois Urbana-Champaign	Urbana, United States
Master of Computer Science; GPA: 4	January 2024 – May 2025

Activities: Graduate Research Assistant at **NCSA**, Course Assistant for Software Design Lab

R.V College of Engineering	Bengaluru, India
Bachelor of Engineering - Computer Science; GPA: 9.24	August 2016 – August 2020

TECHNICAL SKILLS

Languages	Javascript, Java, Typescipt, Python, C#, SQL, Groovy
Technologies	Spring Boot, Express, React, NextJS, NestJS, Angular, .Net, AWS, Azure, Kubernetes, Docker
ORM	Sequelize, TypeORM, Hibernate ORM, Entity Framework
Certifications	Microsoft Certified: Azure Fundamentals, Certified Kubernetes Application Developer

EXPERIENCE

American Express Global Business Travel	Chicago, United States
Software Engineer Intern	May 2024 - August 2024

- Designed end-to-end Python data validation framework at Egencia using **Snowflake**, **Pandas** & Datadog, improving data quality by 40% and enforcing accuracy, completeness, & timeliness across data pipelines.
- Developed automated alerting mechanisms with **Datadog**, reducing issue resolution time by 60% and enhancing operational efficiency by 30% through real-time notifications for data quality issues.

McKinsey & Company	Bengaluru, India
Software Engineer II	November 2022 - January 2024

- **Senior Backend developer for a US Energy client**
  - Led the development of **Python Engine** using **Pandas** to digitize the energy forecasting process & integrated the engine with Azure Queue Storage to facilitate the communication with frontend
  - Deployed the engine using Azure App Service & dynamically scaled out the instances based on the request load
- **Senior Backend developer for a US Pharma client**
  - Engineered **Express microservices** to efficiently process & visualize 10,000+ rows of healthcare data, aiding in selecting the appropriate medications
  - Integrated backend microservices with **AWS S3**, facilitating seamless access to data engineering pipeline output, improving data accessibility, & enhancing overall system efficiency
  - Implemented the integration of backend microservices with the client's **Active Directory** system to enable seamless **authentication** & **authorization** processes
- Led **code-pairing interviews** for both 2023 interns & lateral hire positions, assessing over 25+ candidates.
- Managed & directed a team of 8 interns in the development of an intranet portal by defining the project scope, conducting daily standup meetings, & ensuring strict adherence to standard coding practices

McKinsey & Company	Bengaluru, India
Software Engineer I	November 2021 - October 2022

- **Backend developer for a Pool Application at US water based client**
  - Built 6 secure, scalable microservices in **.Net**, empowering 100+ pool owners with real-time maintenance tracking, live expert video calls via a mobile & web app.

- Integrated backend systems seamlessly with a range of 3rd-party platforms, including **SightCall**, **SendGrid**, **Twilio**, & Azure Services like **Storage Account**, **Redis**, & **Azure Service Bus**
  - Designed an **Azure pipeline** for deploying the shared library to a private NuGet feed
- Led sessions for over **10+ interns** at Tech University 2022, focusing on holistic **backend development**, including database management, Sequelize ORM, & unit testing

McKinsey & Company   Bengaluru, India
Junior Software Engineer   July 2020 - October 2021

- **Backend Developer for a Food Delivery Application at a US Healthcare Client**
  - Developed a suite of 11 microservices using **Spring Boot & Groovy** to manage & track orders for chronically ill customers on a subscription basis
  - Created multiple **batch jobs using Spring Batch** to send asynchronous notifications via Email using **Amazon Simple Email Service** & SMS using **Twilio** to over 1000 users about the order status
- **Fullstack Developer for a VIP Ecommerce Solution at a US Ecommerce Client**
  - Built a responsive ecommerce website using **NextJS** & **Tailwind CSS** & a highly secure, extensible backend using **NestJS** & **GraphQL**
  - Implemented a **GCP cloud function** that efficiently decoupled the asynchronous loading of over 1000's products from the client's enterprise system to **Strapi CMS**, streamlining data management & reducing data transfer times significantly
  - Researched & applied **ADA compliance** guidelines using tools like **WAVE**, **axe Accessibility Testing**, a **color contrast analyzer**, etc., resulting in a 15% increase in application accessibility
- **Frontend Developer for an internal banking asset**
  - Developed a web application using **React**, which facilitates technical & governance teams to maintain a tracker of datalakes associated with banks
  - Enhanced **code quality** by resolving **SonarQube** issues & actively contributing to PR reviews

McKinsey & Company   Bengaluru, India
Software Intern   January 2020 - June 2020

- **Frontend Developer for an energy forecasting application at US energy client**
  - Developed a web application using **Angular** to run energy forecasts & visualize data through charts, significantly reducing forecasting time from several months to just 10 minutes
  - Implemented end-to-end **automation test cases** for energy forecasts utilizing the **Protractor framework**, ensuring robust testing coverage & saved significant time in testing
- Developed an intuitive platform for modeling cloud architecture with terraforms, & streamlining the deployment to AWS, & Azure resulting in a 40% reduction in deployment time & improved scalability

AirAsia Tech   Bengaluru, India
Software Intern   June 2019 - July 2019

- Developed a map-based interactive flight search feature using **JavaScript** & seamlessly integrated it with **Google Maps**, enhancing user experience & enabling them to visualize AirAsia's connectivity

ACADEMIC PROJECTS

- DocBot: Personal biomedical assistant: Engineered a domain-specific biomedical chatbot by fine-tuning the SciBERT NLP model on the BioASQ dataset, enabling efficient retrieval & generation of contextually accurate answers to complex biomedical queries
- Time Series Forecasting of Store Sales: Developed a comprehensive time series forecasting system leveraging statistical methods (ARIMA, SARIMAX) & machine learning models (XGBoost, LightGBM) to optimize inventory management & improve sales predictions
- Kafka ML Balancer: Developed an intelligent load balancing system for Apache Kafka clusters, leveraging ML models to dynamically allocate partitions to brokers based on real-time workload patterns & metrics
- Image Caption Generator: Automatically describes the content of an image using InceptionV4 & LSTMt of an image using InceptionV4 & LSTM