

MANU HEGDE

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EDUCATION

Master of Science (MS) in Computer Science & Software Engineering
University of Washington | Bothell, WA

06/2025

Bachelor of Engineering (BE) in Computer Science & Engineering

Dr. Ambedkar Institute of Technology, Visvesvaraya Technological University | Bengaluru, India

06/2019

TECHNICAL SKILLS

Languages: Python, Kotlin, Java, C++, JavaScript, TypeScript; HTML, CSS, Shell Scripting (Bash, Zsh), SQL

Frameworks: ReactJS, React Native, Redux, Dropwizard, Springboot, JUnit5, Locust, Mockito, Django, Flask

Technologies: Microservices, Kubernetes, Jenkins, Github Actions, Maven, Git, Docker, Linux, Apache Spark, Elasticsearch, Redis, EventHub, Kafka, Prometheus, Grafana, PostgreSQL, Azure SQL Server, CosmosDB, MongoDB, Google Cloud Firebase

WORK EXPERIENCE

Graduate Research Assistant, University of Washington, Bothell, WA

11/2023 - Present

- Set up CI/CD using Github Actions and lightweight kubernetes cluster(K3s), reducing deployment time upto 91.6%
- Set up monitoring with Prometheus & Grafana to enable real-time monitoring and alerts
- Optimized runtime performance of backend services in python django by 29% (saving 600ms+ per request)
- Re-architected APIs to leverage UI data store (Redux) more effectively, yielding performance improvement by 27%

Software Engineer Intern, Vaccine Genie, Seattle, WA

07/2024 - 08/2024

Vaccine Genie is a Seattle based startup focused on translating and digitizing immunization records for travellers

- Built and beta released OCR (Optical Character Recognition) and Translation capabilities in the Vaccine Genie mobile app
- Implemented and tested the Chinese to English OCR and translation workflow

Senior Software Engineer - L3, Tekion Corp India, Bengaluru, India

01/2023 - 07/2023

Tekion is a California based automotive software company funded by former Tesla CIO

- Co-led the development & launch of Phase-I pilot backend for an e-signing platform targeting 4 major car-dealership groups in the US, resulting in a standardized e-signing experience across Tekion's software products
- Designed & deployed new micro-services in Java for real-time screen-sharing & collaboration facility and a service to regulate the signing process. Also co-refactored 2 existing services, yielding 18% improvement in API response time.
- Recognized for swift execution, simplifying the processes, guiding the team and outpaced launching of features

Data Scientist, Udaan (Hiveloop Technology Pvt. Ltd.), Bengaluru, India

01/2022 - 12/2022

- Developed & piloted model for demand forecasting top 100 items in a Tier-I warehouse, potentially saving cost upto 11%

Product Engineer, Udaan (Hiveloop Technology Pvt. Ltd.), Bengaluru, India,

07/2019 - 12/2021

Udaan is one of the top B2B e-commerce platforms of India serving millions of retailers, funded by Lightspeed ventures

- Initiated & led data platform project to enable self-serve near real-time data workflows for software engineers, analysts, data scientists and business stakeholders; which currently handles petabyte-scale data regularly
- Worked full-stack, building & scaling micro-services and infrastructure for front-end, middle-ware & back-end modules
- Iterated on product & features to achieve 100% company-wide voluntary adoption
- Worked on scalability & fault-tolerance, reducing outages by 63% and total cost by 54%
- Developed query execution orchestration engine, resulting in sub-linear growth of cost, with v3 costing 70% less than v0, reducing platform total cost by 19%
- Architected DAG (Directed Acyclic Graph) based execution to reliably enforce data dependency & integrity
- Rearchitected critical microservices & databases by leveraging caching and event driven architecture increasing resource efficiency by 2.5x and improved robustness
- Co-architected MLOps Platform (Feature Store, Versioned Model Pipeline, Versioned Data catalog and Notebooks Integration) to enable numerous additional use cases
- Overall Impact: improved execution efficiency for existing use cases by 2-22x and enabled hundreds of new use cases
- Part of hiring panel for product & software engineers, interviewing 100+ candidates, mentored interns and college graduates
- Received #crushing.it award for leading and building data platform, which received usage score of 8.1 from 2400+ users

PROJECTS

- **FarmTV** - Created a react native app for farmers of KA, India to watch scientific agricultural videos. Has 50,000+ downloads and 1000+ daily active users; <https://shramajeevi.com/#farmTV> 03/2021 - 06/2021
- **Radiant Board** - Developed firmware (embedded C) and desktop application (C++ .Net) for an Information Display Board powered by ATmega1280 controller, used by 2000+ stores of BPCL across India 04/2017 - 08/2017
- **osh** - command line application to debug and fix errors using LLMs - winner of Hasgeek Deephack 2023 in developer tools category; getosh.com 03/2023 - 04/2023
- **manuOS** (hobby project) - Developed a basic X86 Kernel written in C and x86 assembly, that can handle basic interrupts; github.com/manuhg/manuOS 09/2011 - 01/2012