

# MANU HEDGE

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## SUMMARY

Computer Science Graduate Student & Research Assistant, ex-L3 Software Engineer with experience in leading teams & building software products for Data Platform, MLOps and e-signing, seeking *software engineering internship* for Summer 2024

## EDUCATION

University of Washington | Bothell, WA, USA

06/2025

Master of Science (MS) in Computer Science & Software Engineering

Courses: Parallel Programming, Machine Learning, High Performance Computing

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

06/2019

Bachelor of Engineering (BE) in Computer Science & Engineering

## TECHNICAL SKILLS

**Languages:** x86 Assembly, C, C++, Python, Javascript Typescript, Kotlin, Java, Clojure; **HTML, CSS, Bash, Zsh, SQL**

**Frameworks & Libraries:** ReactJS, React Native, Dropwizard, Springboot, JUnit5, Locust, PyTorch, PySpark;

**Technologies:** EventHub, Kubernetes, Microservices, Git, Docker, Apache Spark, REST API, CI/CD;

**Platforms:** AWS (Amazon Web Services), GCP(Google Cloud Platform), Microsoft Azure; **OS:** Arch Linux, Ubuntu, MacOS;

**Databases:** PostgreSQL, Azure SQL, Azure CosmosDB, MongoDB Atlas, Google Cloud Firebase; **Caches:** Redis, Aerospike;

## WORK EXPERIENCE

Tekion Corporation

Bengaluru, India

Senior Software Engineer (L3)

for 7 months: 01/2023 - 07/2023

- Co-led the development & **launch** of Phase-I pilot backend for an e-signing platform (web application) **targeting 4 major** car-dealership **groups** in the US, resulting in a standardized e-signing experience across Tekion's software products
- Improved team culture by cultivating document-driven discussions and **test driven development** practices
- 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**

Udaan (Hiveloop Technology Pvt. Ltd.)

Bengaluru, India

Data Scientist

for 1 of 3.5 years: 01/2022 - 12/2022

- Developed & launched a pilot model (**gradient boosted tree**) for demand forecasting of selected items in one Tier-I warehouse, *obtaining* SKU(inventory) aggregation and substitution strategies potentially saving upto **11% wastage**
- Built & launched a pilot model (**ensemble**) to target FMCG brand ads for buyer cohorts across multiple cities in India, *yielding* insights into ads-budgeting strategies
- Created models (**probabilistic, non-linear**) for understanding the impact of different in-app ad widgets, *helping* stack-rank in-app ad-placement locations

Product Engineer - Data Platform

for 2.5 of 3.5 years: 07/2019 - 12/2021

- Started & led the project to create a unified near real-time self-serve data platform, based on Databricks **Delta Lake** technology, that handles petabyte-scale data regularly
- Worked across the software stack, setting up & scaling infrastructure and micro-services for front-end, middle-ware & back-end modules; from code base to data lake to network configurations and everything in between
- Iterated on product & features to achieve **100%** company-wide **adoption within 4 months** of launch
- Focused on scalability & fault-tolerance, reducing outages by **63%** and total cost by **54% over 3 quarters**
- Contributed to architecting **MLOps Platform** (Feature Store, Versioned Model Pipeline, Deployment Infrastructure, Versioned Data catalog and Notebooks Integration)
- Hiring & Leadership:** On the hiring panel for product & software engineers (interviewed 100+ candidates), mentored college graduates and expanded the data platform team to **6 engineers**
- Overall Impact:** improved execution efficiency for existing use cases by **2-22x** and enabled hundreds of new use cases (compared to an existing, third-party solution that was in use)
- Recognitions:** Received a **#crushing.it** award for leading and developing the data platform, which also received an NPS score of **8.1 from 2400+ users**

Tika Data

Bengaluru, India

Deep Learning Intern

for 6 months: 01/2019 - 06/2019

- Built tool to extract video frames containing specific objects using image detection models (**YOLO V2 & Detectron**)
- Implemented a research paper to develop a face image generator based on a set of input faces using GAN (**StyleGAN**)

## PROJECTS

- osh** - command line application for debugging and fixing errors, **winner of Hasgeek Deephack 2023**; *getosh.com*
- 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; *play.google.com/store/apps/details?id=com.shramajeevi.farmtv*
- Radiant Board** - Designed and implemented **firmware** (embedded **C**) and desktop application (**C++**.Net) for an Information Display Board powered by ATmega1280 controller, used by **2000+** stores of BPCL
- fsort** - Built desktop application for content-based image segregation using **Inception V3 CNN & T-SNE** clustering; *github.com/manuhg/libfsort*
- manuOS** - Developed a basic X86 Kernel written in C and x86 assembly for hobby; *github.com/manuhg/manuOS*