

Manan Mrig

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EXPERIENCE

Machine Learning Engineer

June 2024 – July 2025

Target Corporation - Machine Learning Engineer, Demand Forecasting Engine/ Inventory Insights

Minneapolis, MN

- Develop and maintain pipelines that process outputs from GAMM models, providing loc, chain-level forecasting for over 100,000 products, enabling data-driven decision-making for 400+ Merchandise and Demand Planners
- Collaborated cross-functionally with data scientists and business stakeholders to develop full stack end-to-end application allowing incorporation of human overrides, improving demand forecasting and supply chain efficiency and resulting in the recovery of \$140 million in lost profits annually at the item-location level.
- Curated and optimized data workflows in Hive, Hadoop, and Postgres to efficiently score and retrain models, ensuring continuous improvement in predictive performance and timely delivery of insights to enterprise consumers.

Teaching Assistant

January 2022 – May 2024

University of Minnesota, Twin Cities

Minneapolis, MN

- Improved learning experience in multiple classes including Machine Architecture and Organization, Software Design for Data Scientists, Programming Concepts, and Discrete Math.
- Maximized student learning in labs by reinforcing concepts taught in lectures, covering material from Virtual Memory, Compilers, C and System calls, to Computer Architecture and Low-level organisation.
- Revise, validate, publish and grade assignments written in C, Python, Java, and Assembly as well as solve student's conceptual questions about Computer Organisation, Software Design, and Programming Concepts.

Software Engineer Intern

June 2023 – August 2023

Target Corporation - Paystack, Core Commerce

Minneapolis, MN

- Extended backend APIs to collect and manage real-time data, contributing to business-critical payments infrastructure used by thousands of customers daily.
- Increased system performance by 95% through unit testing and velocity-powered performance optimization, ensuring efficient data processing under heavy load conditions.
- Worked within the Paystack Team and learned intricacies of payment infrastructure of a Fortune 40 company used every day by thousands of target guests.

Software Engineer Intern

May 2021 – July 2021

Centrl Inc.

Mountain View, CA

- Assisted in translating legacy BNCF Customer Admin system based in PHP to Java and Springboot, increasing speed and accuracy by 20% .
- Designed and Implemented an upgraded authentication system using Google's OAuth2 Authorization Framework in a Springboot application that outperformed the original.
- Aided the deployment process of internal application used by 30+ users on a day to day basis.

Instructional Technology Support

Jan 2021 – December 2021

Carlson School of Management, University of Minnesota

Minneapolis, MN

- Automated attendance, populating classes in canvas with Google Scripts/Javascript Decreasing faculty administration time by 15 hours per week on average.

TECHNICAL SKILLS

Languages: C/C++, Python, Java, Kotlin, SQL, BASH, Assembly x86_64, JavaScript/TypeScript, OCaml, Verilog

Frameworks: Micronaut, Springboot, Django, Flask, NumPy, Matplotlib, TensorFlow, TCP/IP, Java RMI

Developer Tools: Git, Docker, Jira, LaTeX, Hadoop/HDFS, Hive, PostgreSQL, Kafka

Platforms: Linux, MacOS, Windows, Arduino, FPGA

EDUCATION

University of Minnesota, Twin Cities

Minneapolis, MN

Bachelor of Sciences. Computer Science

May 2024

- CSE Dean's list for exceptional academic performance for Fall '20, '23 & Spring '24 Semesters
- Courses: Software Engineering, Machine Learning, Databases, Distributed Systems, Networks, Operating Systems, Algorithms and Data Structures, Artificial Intelligence, Machine Architecture, Linear Algebra, Discrete Math.
- Community Involvement: Vice President, Beta Chi Theta National Fraternity and Asian Student Union.