

Avnish Kanungo

West Lafayette, IN 47906, USA

avnishkanungo@gmail.com [linkedin.com/in/avnish-kanungo-490086b3](https://www.linkedin.com/in/avnish-kanungo-490086b3) Phone: +1(773)696-8488 <https://github.com/avnishkanungo>

EDUCATION

Purdue University, West Lafayette, USA

CGPA:3.93/4

August 2023 - April 2025

Degree: Master of Science (MS) in Computer and Information Technology (Machine Learning and Robotics Track)

Thesis(Ongoing): Human Feedback based LLM-informed Task and Path Planning in Multi-Robot Environments.

NMIMS University, Mumbai, India

August 2014 - April 2019

Degree: Integrated Bachelor of Technology (B.Tech) in Computer Engineering and MBA in Technology Management

SKILLS

Programming: Python, SQL, Swift, R (Programming Language), Pytorch, TensorFlow, Hugging Face, Scikit-Learn, Java, Kotlin, Spark, Hive, Snowflake, Linux, C++, CUDA, Deepspeed, Web Technologies (HTML, CSS, JavaScript, React.js), GitHub/Gitlab.

Technical Skills: Data Analysis, Statistical Methods, Product Management, Data Structures and Algorithms, Object-Oriented Programming Concepts, System Architecture, Machine Learning, Deep Learning Frameworks/Models, Large Language Models, Transformers, Database Management, Distributed Computing, Time Series Analysis, Linear Regression, Logistic Regression, Stochastic Processes, Exploratory Data Analysis, ETL, OLAP, RDBMS, AWS, Google Cloud

WORK EXPERIENCE

Purdue University, West Lafayette

Aug 2023 - Present

Graduate Teaching Assistant

- Teaching students Database Fundamentals with SQL and Introduction to Computing with C and Python.
- Responsible for delivering labs for both the courses, tracking the student progress, and grading them based on the work that they turn in.

Criteo, Gurgaon

July 2022 - Aug 2023

Product Expert, App and Data Solutions

- Engineered end to end data-backed client-side SAAS solutions for APAC region using SQL data extraction, Python-based time series forecasting (pandas, scikit-learn), and A/B testing, driving an 18% increase in product adoption through data-driven insights.
- As a subject matter expert and POC for technical research, knowledge base development and guidance collaborated with local technical sales and solution engineering teams for issues related to the system integrations, leading to a 25% decrease in level 2 escalations and achieving 98% issue resolution rate on bugs.
- Managed the development, prototyping, integration and usage tracking of new features in the recommendation engine for android and iOS, leading to a 15% decrease in testing and UAT time.

Branch.io, Bangalore

Oct 2020 - July 2022

Integration/Software Engineer

- Responsible for client-facing engineering, technical analysis and implementations related to Branch's attribution engine for 150+ enterprise accounts, resulting in a 20% improvement in implementation efficiency and a 32% decrease in level 2 escalations.
- Led predictive matching implementation for APAC clients, applying Linear Regression models for user-item affinity scoring and usage pattern analysis(scikit-learn), achieving a 90% implementation success rate and enhancing recommendation accuracy.
- Developed a hybrid model combining LSTM-based time series forecasting with causal inference techniques(Pytorch, Hugging Face) to predict and explain lower funnel conversions for iOS, achieving RMSE of 15% and MAE of 10% while identifying key conversion drivers.

Netcore Cloud, Mumbai

May 2019 - Oct 2020

Product Manager, SDKs and Recommendations

- Managed the product life cycle for Rule-Based Personalization and AI-based Recommendation Engine, resulting in a 15% increase in conversions across platforms.
- Integrated Recommendation Engine APIs into Email and App Push Modules, boosting conversion rates by 10% through owned marketing channels, and performed A/B tests using Google Optimize to further optimize the usage metrics by an extra 8%.
- Worked with external ML/AI vendors for maintaining the backend ecosystem for training, evaluation and serving our models.

PROJECTS

AudioNLToSQL: Running SQL queries using voice commands and text

June 2024 – July 2024

- Created a system combining an Automatic Speech Recognition Model and fine-tuned version of GPT 3.5 to convert voice and text commands to SQL queries and creating an automation to run the query on a hosted MySQL database and return the result.
- Utilized OpenAI Models, HuggingFace Library, Langchain, Pytorch, SQL, SQLAlchemy for implementation.

Hyper-Parameter Tuned DDPG Implementation on Robotic Arm

Jan 2024 - Feb 2024

- Implemented Deep Deterministic Policy Gradient from scratch using Pytorch for FetchReach-V2 robotic environment with hyperparameter tuning with Optuna. Post 5000 training episodes, success rate to reach the specific point was 91%.

Semantic Segmentation for Image Representation and Classification

March 2024 - April 2024

- This project implements semantic segmentation using the u-net architecture on the MS COCO dataset using Pytorch. The evaluation is conducted using Mean Squared Error (MSE) Loss, Dice Loss, and a combined Dice-MSE Loss.

Intrusion Detection System (IDS) and Malware Classification using Deep Learning Techniques

Aug 2024 – Sept 2024

- Developed an IDS based on LSTM-CNN network based on UNSW-NB15 Malware Dataset, using Tensorflow and scikit-learn. Implemented principal component analysis for feature engineering to get an accuracy of 93.5%, F1 Score of 0.907 and AUC of 0.89.