Aditya Khadkikar

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Education

Uppsala University — Uppsala, Sweden
M.Sc. Data Science, Department of Information Technology — Aug. 2024 - Jun. 2026

University of Gothenburg — Gothenburg, Sweden
B.Sc. Software Engineering & Management, Department of Computer Science & Engineering — Aug. 2021 - Jun. 2024

Experience

AI Summer Intern Developer — Stockholm, Sweden
Ericsson R&D — Jun. 2024 - Aug. 2024

- ◇ Worked with fine-tuning of Large Language Models in applications of telecommunication products and specs-information retrieval at Ericsson R&D.
- ◇ Used **LangChain** and **LangGraph** as key frameworks to bring forward a multi-agent RAG solution in Python, that evaluates completeness of user request, and appropriate retrieval of correct product data, as well as redirecting to different data sources depending on the nature of the query.
- ◇ Demonstrated familiarity with **Apache Jena (Fuseki)** as a graph database (schema understanding, query modifications) and **OpenSearch** as a vector database.

Teaching Assistant — Gothenburg, Sweden
Chalmers University of Technology — Jun. 2023 - Nov. 2023

- ◇ Assisted the professor in supervising project groups during the upcoming iteration, as well as helped re-design assignments and material for students prior to course-start. Worked for the course DIT345 Fundamentals of Software Architecture.

University of Gothenburg — Aug. 2022 - Jun. 2023

- ◇ Helping professors in conducting sessions for students, for solving exercises, resolving queries and revising concepts taught during lectures. Additionally, assisted in supervising assignments, as well as grading exams. Worked in courses:
  - * DIT023 Mathematical Foundations for Software Engineering
  - * DIT094 Mini Project: Team Programming
  - * DIT033 Data Management
  - * DIT185 Software Analysis and Design

Projects

Stochastic/Deterministic Simulations for Modelling Circadian-Rhythm Genetic Oscillators using NumPy — Apr. 2025

- ◇ An ODE model and a Random Walk (Monte Carlo Markov Process) was used, with the rates of change of all generated and binding proteins in the genetic oscillators simulated. Reproduced from *"Mechanisms of noise-resistance in genetic oscillators"* by Vilar et al.

Advanced Convolutional Architectures on the MNIST-2D Dataset using PyTorch — Mar. 2025

- ◇ A series of advanced deep neural network models were trained using PyTorch on the MNIST-2D dataset, and their **accuracies, loss statistics and usabilities** were analyzed. Model architectures such as Normal Feed-forward CNN, with Stochastic Gradient Descent + ADAM (quicker convergence, requiring **only** ≈**1/8th** the number of iterations than w/o ADAM for reaching >90% test accuracy). Other architectures implemented were **residual CNNs, *bottleneck* residual CNNs** and **DenseNet**.

Marketpulse - AI Stock Market Trend Analysis App using React, Django, Tensorflow, Google Kubernetes Engine — Jan. 2024

- ◇ Personally contributed on training a deep neural network on analysing stock-based tweets to derive **sentiment of the future trend of a stock**. Additionally, worked on creating the **admin-side interface**, where new models can be uploaded, performance graphs and confusion matrices can be generated, and existing models be used as starting points to train new versions.

Dentistimo - Distributed Appointment Management Application using React, MQTT, Typescript, MongoDB — Jan. 2023

- ◇ Contributed on creating the frontend interface using the React Library, with the rest of the stack consisting of MQTT, Typescript and MongoDB. Featured functionalities such as concurrent dentist booking management, viewing available dentistries and visiting information cards, as well as booking timeslots based on availability.

Technical Skills

ML/AI: PyTorch, LangChain, NumPy, Pandas, Tensorflow
Data Eng.: PostgreSQL, MongoDB, Neo4j, Apache Spark, Apache Pulsar
CI/CD: Gitlab CI, Ansible, Docker
Web: Django, VueJS, React TS
Testing: JUnit, PyTest, Postman

Volunteering

Member of Development Division - Uppsala AI Society — Aug. 2025 - Present
Library Committee Representative - Västmanlands-Dala Nation — Oct. 2024 - Dec. 2024

Awards

1st Place - Capgemini Hackathon — May 2022, Gothenburg, Sweden