

An Engineer with 4+ years of research and industry experience across data engineering, backend systems, cloud architecture, machine learning, Deep Learning, and GenAI applications. Experienced in building production-oriented data pipelines, ML-backed APIs, RAG/chatbot, cloud-hosted services, and research data infrastructure. Proficient in problem solving and skilled in Teamwork and Leadership, with a strong track record of success in developing Products in AI, publishing research in leading technical journals, applying and adapting state-of-the-art techniques to solve complex problems in a variety of fields.

WORK EXPERIENCE

Data Engineer and Scientist

August-Wilhelm Scheer Institut

Oct 2023 — Present

Saarbrücken, Germany

- Developed a Data Management Pipeline in C# that enables researchers in Chemical Engineering to optimize and automate the manufacturing and research process.
- Developed a Data Provenance and Modeling Pipeline to verify the integrity of research data generated by sensory devices in the domain of Chemical Engineering.
- Developed a Python Client to automate and assist researchers to manipulate, pre-process and upload the data.
- Conceptualized and developed a machine learning pipeline that automates the testing of electrochemical cells and categorizes them as defective in long term use.

Data Engineer

Nimoy IT Solutions Pvt. Ltd.

Feb 2022 — Sep 2023

Gurugram, Haryana

- Conceptualized, prototyped and developed an NLP pipeline that can generate Quizzes using Transformers and deployed on a cluster of 8 GPUs.
- Developed and deployed backend APIs for consumption of the Quiz Generation Pipeline.
- Deployed an ML based service that can fetch the book based on the visual input given using Textract, OpenSearch and Wizenose and uses Redis to store sessions.
- Developed an OAuth 2 authorization server in python and a Django application template for consuming the auth services. Implemented on all pre-existing services.
- Managing, reviewing and maintaining code-bases across different projects and services.
- Prototyped and Deployed multiple chatbot PoCs leveraging GPT-3, 3.5, 4 and Vectorstores like pinecone across different domains and use cases.

Backend Developer

Nimoy IT Solutions Pvt. Ltd.

July 2021 — January 2022

Gurugram, Haryana

- Deployed several ML-based services into Production running on Django Rest Framework, dockerized and hosted on Linux instances.
- Developed and deployed an application for taking attendance of the students leveraging the Face Recognition Service provided by AWS Rekognition and deployed as a micro-service.

PUBLICATIONS

- Minu Rose *, **Sanxchep Sharma** *, Veit Königer, Vincent Nebel, Jonas Oehm, Christian Weisenberger, Laura Bies, Volker Knoblauch. "Detecting Anomalous Cell Behavior in Electrochemical Battery Testing using Machine Learning." Wiley-VCH, forthcoming. (2026). * Co-first authors
- Ayush Prasad, **Sanxchep Sharma**, and Harshvardhan Agarwal. "Forecasting Marine Heatwaves using Machine Learning." EarthArXiv, (2022/2/5).
- **Sharma Sanxchep**, Ayush Prasad, and M. Pajany. "A Scheduling System for an Energy Storage Device using Photovoltaic and Demand Forecasting." 2021 2nd International Conference on Advances in Computing, Communication, Embedded and Secure Systems (ACCESS). IEEE, 2021.

EDUCATION

Masters in Science (M.Sc) in Artificial Intelligence, Friedrich-Alexander-Universität

2023 — Present

Bachelor of Technology (B.Tech) in Information Technology, Sikkim Manipal Institute of Technology

2018 — 2022

High School, Delhi Public School Guwahati

2016 — 2018

SKILLS

Programming Languages	Python, SQL, SparQL, Bash, C, C++, C# (.NET), JavaScript, Java, HTML5/CSS, $\text{\LaTeX}$, Markdown
Tools and Technologies	Machine Learning, Deep Learning, Classical ML, Supervised and Unsupervised Learning, Anomaly Detection, Time-Series Forecasting, NLP, Computer Vision, Large Language Models, Generative AI, Agentic AI, RAG, LangChain, Transformers, OpenAI APIs, Vector Databases, Data Engineering, ETL, Data Pipelines, Data Quality, Data Provenance, Model Evaluation, MLOps, CI/CD, FastAPI, Django REST Framework, Flask, Microservices, REST APIs, OAuth2, AWS, EC2, S3, Textract, Rekognition, GCP, Azure, Azure Functions, Serverless, Docker, Kubernetes, Linux, Ubuntu, Nginx, Gunicorn, Redis, PostgreSQL, MySQL, NoSQL, OpenSearch, Elasticsearch, Apache Kafka, Pinecone, Git, GitLab CI/CD, Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, OpenCV, Streamlit, Tableau, Jupyter Notebooks, Inference Optimisation

ACTIVITIES

Sikkim Manipal Institute of Technology, Student Backend Developer	2020
Sikkim Manipal Institute of Technology Model United Nations, Director of Technology	2019 — 2020
TEDxSMIT, Event Management	Fall 2018