Prasanga Dhungel

Personal Information

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ADDRESS	Munich, Germany
KEY INTERESTS	Interpretable Machine Learning, Statistical Inference, Medical Imaging, Algorithm Optimization, Low-resource NLP, Big Data Systems

Work Experience

Apr 2025 – Ongoing

Machine Learning Engineer, E.ON, Munich, Germany

- Architected end-to-end ML infrastructure on **Azure using Terraform** for infrastructure-as-code, enabling reproducible and scalable deployments with **99% uptime**.
- Designed production-grade **CI/CD pipelines (GitLab CI)** with blue-green deployment strategies, achieving zero-downtime model updates and **30% cost reduction** through optimized resource allocation.
- Built comprehensive model lifecycle management using **MLflow** for experiment tracking, hyperparameter optimization, versioning, and performance monitoring.
- Led recruitment, onboarding, and mentorship of two junior data scientists, fostering a high-performing, collaborative, and learning-focused environment

Sep 2023 – Mar 2025

Data Scientist (Working Student), E.ON, Munich, Germany

- Led migration of legacy on-premise data analysis to **Azure**, transforming manual 3-day analysis into automated daily pipeline, **reducing time-to-insight by 66%**.
- Architected **Apache Airflow DAGs** for automated data ingestion, preprocessing, model training, and evaluation with real-time anomaly detection capabilities.
- Developed novel **Robust-PLS algorithm** optimized for high-dimensional, correlated feature spaces with outlier resistance, achieving **7% improvement in MAE**.
- Implemented custom noise detection and reduction algorithms, improving sensor reliability metrics across deployment scenarios.
- Partnered with hardware suppliers and stakeholders to translate sensor physics into ML feature engineering strategies, establishing data-driven decision frameworks.

Apr 2021 – Mar 2023

Data Scientist, Naamche Inc

- Developed end-to-end ML systems for real estate investment optimization, processing $20M+ in property evaluations. Trained **ensemble of ARIMA, Prophet, and LSTM** to forecast revenue that only had 14% of error on hindsight. Worked on physical and geospatial feature extraction pipeline analyzing 100K+ properties. Translated complex ML outputs into business metrics such as ROI, IRR, and Cap Rate, improving portfolio returns by 12%.
- Architected a **conversational real estate assistant**. Implemented BERT-based intent classification, and developed custom NLG (GPT-2 fine-tuning) for human-like property descriptions.
- Partnered with C-suite executives to define technical requirements and demonstrated ROI impact through bi-weekly demos.

Nov 2020 – Mar 2021

Computer Vision Research Intern, NAAMII

- Designed 3D lung lesion segmentation pipelines for COVID-19 CT scans using U-Net and DeepLabV3, achieving results on par with SOTA benchmarks.

EDUCATION

Apr 2023 Jun 2025	**Masters in Informatics** **Technical University of Munich (TUM)**, Munich, Germany **Thesis**: Efficient Large-Scale Data Pruning Using Score Extrapolation **Supervisor**: Prof. Stephan Günnemann **Thesis Grade**: 1.0/1.0 **Major Coursework**: Deep Learning, Statistical Learning, ML for Graphs and Sequential Data, Advanced NLP, Deep Generative Models, Computer Vision, Quantum Computing, Tensor Networks, Deep Learning for Medicine **Overall Grade**: 1.2/1.0, **Passed with High Distinction (Top 8 %)**
Nov 2016 Apr 2021	**Bachelors In Computer Engineering** **Institute of Engineering**, Pulchowk Campus, Nepal **Major Coursework**: Theory of Computation, Data Structure and Algorithms, Operating System, Artificial Intelligence, Computer Organization and Architecture, Discrete Structure, Calculus, Data Mining, Probability and Statistics, Big Data **Grade**: 79.57% in aggregate **(Top 10 %)**

PUBLICATIONS

Jun 2025	Schmidt, Sebastian, Dhungel, Prasanga, et al. "Effective Data Pruning through Score Extrapolation." arXiv:2506.09010, 2025
Dec 2020	Dhungel, Prasanga, et al. "An Efficient Video Compression Network." International Conference on Advances in Computing, Communication and Networking. IEEE, 2020

ACHIEVEMENTS AND AWARDS

Oct 2024	Awarded the **Deutschlandstipendium** (sponsored by **Amazon**), granted to the **top 900 out of 50,000** students, providing €300/month as financial support
Jul 2016	Selected among **top 5 students** to represent Nepal at 47th **International Physics Olympiad**, Zürich Switzerland
Nov 2018	Represented Nepal in ACM-ICPC, Dhaka regionals
May 2020	Winner: A Day of Code
Feb 2019	Winner: Locus Codejam
Jan 2018	Winner: National Level Programming Contest
Sep 2020	Second Place: DandyHacks organized by the University of Rochester via Devpost

SKILLS

Programming	Python (Expert), C++, C, R, Java, Javascript, MATLAB, Latex, Bash/Shell
AI & ML	PyTorch, TensorFlow, Numpy, Scikit, Scipy, Huggingface, Pandas, Dash, OpenCV, Statsmodel, MLflow, W&B
MLops, Devops	Azure, AWS, Terraform, Docker, CI/CD (GitLab, Github), MLflow, Databricks, Apache Airflow, Kubernetes (Basic), Prometheus, Grafana
Database	PostgreSQL, MySQL, ElasticSearch, MongoDB, PostGIS, SQLAlchemy, Alembic, Delta Lake, Spark, Snowflake
Web	FastAPI, Django, Flask, REST APIs, Streamlit, Dash, Nginx, Apache, React, Vuejs, HTML/CSS/JavaScript,

LANGUAGE PROFICIENCY

English	TOEFL(109: 29R, 29L, 23S, 28W)
German	A1.2