Vedasri Nakka

Work Permit Available

Contact details

vedasri.g555@gmail.com
+49 1520 478 9707
Munich, Germany
German Proficiency - A2

Personal Website:
vedasrinakka.github.io

LinkedIn:
vedasri-nakka-8a7865b3

Skills

Languages:
- Python (NumPy, Pandas, Matplotlib, Scikit-learn, Seaborn, TensorFlow, PyTorch, ray.tune, NLTK, spaCy)
- Java
- JavaScript
- C
- R

Tools & Technologies:
- Docker
- Git
- Anaconda
- Google Colab
- Kaggle
- Visual Studio
- Eclipse
- LaTeX
- Microsoft Office

Soft Skills:
- Academic writing
- Time management
- Teamwork
- Problem-solving
- Documentation
- Logical thinking
- Engaging presentations

Education

Master of Science in Computer Science — GPA: 5.0/6.0
University of Neuchatel, Bern & Fribourg - Switzerland — Feb 2021 - Sep 2024

Bachelor of Engineering in Electronics Engineering — 73.0%
BVRIT, Jawaharlal Nehru Technological University - India — Jul 2013 - Jul 2016

Work Experience

Cyient Private Limited — Aug 2016 - Aug 2019
Role: Software Engineer — Under: Shailesh Deshpande

- Designed customized solutions for ServiceNow modules and expertly managed data loading through import sets.
- Integrated ServiceNow with external and internal tools, including JIRA and Netcool.

Technical Projects

Thesis: Contrastive Learning for Greek Letter Detection — Feb 2024 - Sep 2024

- Evaluated SimCLR for Greek letter recognition, comparing performance with traditional supervised models.
- Conducted experiments using pretraining and fine-tuning strategies. arXiv: *https://arxiv.org/abs/2409.10156* & *https://github.com/VedasriNakka/MS_project*
- Investigated the effects of different data augmentation strategies on SimCLR's performance and analyzed why traditional supervised models achieved better results in Greek letter recognition tasks.

Explainable AI - HCI meets Artificial Intelligence — Feb 2021 - Jun 2021

- Conducted a study to interpret CNN decisions on the CUB200 dataset against adversarial attacks (FGSM, PGD). Read scientific article *github.com/MS_seminars*
- Implemented adversarial experiments on VGG16, Attention Pooling, and Prototypical Networks, using CAM techniques to explain attack success.

Pattern Recognition — Feb 2021 - May 2021

- Developed a k-NN algorithm, comparing distance metrics. Created a K-means clustering model and evaluated with C-Index and Dunn-Index.
- Trained a Multilayer Perceptron (MLP) with one hidden layer in PyTorch for for image classification, performed hyperparameter tuning through grid search.

Machine Learning & Data Mining, Fuzzy sets — Sep 2022 - Dec 2023

- Applied machine learning algorithms (Naive Bayes, k-NN, Decision Tree, Simple rules) to the Titanic dataset for analysis. Conducted data extraction and manipulation in Python.
- Built a fuzzy theory-based travel recommendation app to enhance user experience by suggesting personalized destinations. See the travel recommendation prototype in git.

Fine-Tuning GPT-2 for Text Generation on WikiText Dataset — from Sep 2024

- Currently working on a project to fine-tune a GPT-2 model using Hugging Face Transformers for custom text generation based on wikitext-2 dataset. Responsibilities include data preparation, model training, and performance evaluation.
- Improved model training with dynamic padding for efficient input processing, gradient clipping for training stability, and custom logging to track text generation quality.

Publications

A life engineering perspective on algorithms, AI, social media, and quantitative metrics
Informatik Spektrum Journal — UniFr - May 2024
Georgiana Bigea, Maria Mumtaz, Edy Portmann, Jennifer Swaminathan & *Nakka Vedasri*