Megh Panandikar

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EDUCATION

New York University — New York, USA
MS in Computer Engineering (GPA: 4.0) — *September 2024 – May 2026*

Veermata Jijabai Technological Institute (VJTI) — Mumbai, India
Bachelor of Technology (Electronics and Telecommunication) (CGPA: 8.13/10) — *July 2019 – May 2023*

WORK EXPERIENCE

iMemori.ai — Bengaluru, India
Software Engineer — *September 2023 – May 2024*

- Fine-tuned the spaCy small NER model to recognize entities for domain specific environments. Generic data from the Enron dataset was first annotated using the ROBERTA based NER model and then augmented by replacing entities at random from a list of domain specific entities. Resulted in a versatile NER model that will be implemented based on the client's use case.
- Assisted in converting the code structure from a monolithic system to a microservices based structure. Refactored over 2000 lines of code in the API module while fixing bugs in code logic and Arango Queries to reduce code smells and code duplications.
- Created a program that can identify a given list of products from any text data, taking into account spelling errors and variations using levenshtein distance. Used a custom tuned NER model to differentiate between product spelling errors and other words based on their context. Processed 500 words in < 100ms.

PricewaterhouseCoopers — Mumbai, India
Technology Consultant Intern — *May 2022 - July 2022*

- Collaborated with the Global Data Collection team to tailor a custom machine learning model to calculate attributes of objects identified for retail analytics, like product visibility using YOLOv5 algorithm.
- Worked in the SAP consultancy team in the production planning department to implement S4HANA for the client. Explored AI solutions to optimize production based on sales data using SAP IBP.

RESEARCH PUBLICATIONS

- **Fine-Tuning a Named Entity Recognition Model using Data Augmentation and Oracle-based Learning,** presented at the 10th IEEE UP Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2023) at Amity University on 1st December 2023. Sponsored by IEEE - link.
- **Recognition of Handwritten Medical Prescription Using CNN Bi-LSTM with Lexicon Search,** presented at the 14th International Conference on Computing, Communication and Networking Technologies (ICCCNT) at IIT Delhi on 8th July 2023. Sponsored by IEEE – link.

PROJECTS

Optimization and RL: – link.

- Performed trajectory optimization from scratch for a simulated quadrotor in python to make it traverse, avoid obstacles, perform looping, etc.
- This included classical optimization techniques like Linear and Sequential Quadratic Programming with Model Predictive Control to handle random disturbances.
- RL techniques like Deep Q learning and PPO with a custom environment in stablebaselines3

Wide ResNet for image classification: - link.

- Placed 5th in a Kaggle competition to model a ResNet with under 5 million parameters from scratch to classify data from the CIFAR-10 dataset, final test accuracy of 88.9% and validation accuracy of 97.3%.
- Implemented mix up data augmentation and Label Smoothening to reduce overfitting on a 43-layer resnet with 9 residual blocks trained for 1000 epochs with cosine annealing learning rate scheduling.

SKILLS

Programming Languages: Python, JavaScript, C++, Arango Query Language, SQL, MATLAB, Octave
Technologies: FastAPI, React, Docker, Pytorch, Langchain, Sklearn, NLTK, SpaCy, TensorFlow, Pandas, NumPy