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EXPERIENCE

MICROSOFT | SOFTWARE ENGINEER

PRAGUE, CZECH REPUBLIC | Nov. 2022 - Present

SCANIA CV AB | MASTER THESIS

SÖDERTÄLJE, SWEDEN | Jan. 2022 - June 2022

- **Thesis Title:** *Super-Resolution Vehicle Trajectory using Recurrent Time Series Imputation*
- The thesis focuses on increasing the temporal resolution of trip data for vehicles using a Recurrent Neural Network (RNN)-based architecture that treats the geospatial data as a time series ([Publication](#) and [GitHub Repository](#)).

FIVE AI | SOFTWARE ENGINEER INTERN

BRISTOL, UNITED KINGDOM | June 2021 - Aug. 2021

- Developed a *PostFlight Check* tool (web app) to **systematically examine** recorded data from the cars based on user-defined diagnostics (plugins) using **FastAPI, Python, HTML and JavaScript**.
- These diagnostics allow users to **identify trends** and issues in the raw, sensor data using **intuitive plots** and **dynamic insights**.
- Also worked with: CI/CD (GitLab), APIs, async, AJAX, polling, *Deployment:* Terraform, Kubernetes and Docker.

HUBERT | SOFTWARE DEVELOPER (CONTRACT)

STOCKHOLM, SWEDEN | Nov. 2020 - Apr. 2021

- Developed a **parsing tool** for extracting information from candidates' CVs to improve Hubert's virtual interview experience.
- Designed an algorithm ranging from **layout analysis** of a document to **semantic structure analysis** of text objects and chunks.
- Trained a **NER model** (*spaCy*) to parse the candidate's information from the extracted sections (education, experience etc.).

CUREASSIST | MACHINE LEARNING INTERN

MUMBAI, INDIA | June 2020 - Aug. 2020

- Developed a crucial module for CureAssist's Mobile App to remotely diagnose a patient in **under 30 seconds**.
- Built a **Graph Database** (Neo4J) on the MeSH Dataset to establish **semantic relationships** among Diseases and Symptoms.
- Trained a Neural Network on this Graph DB to accurately predict a disease based on the patient's symptoms.

PROJECTS

SHOWML | A MACHINE LEARNING PYTHON PACKAGE

- A Python package of fundamental **Machine Learning Algorithms implemented from scratch** (using *NumPy*), aiming to present their inner working in a **transparent** and **modular** way.
- Contents- *Algorithms:* Regression, Deep Neural Networks, *Optimizers:* SGD, *Losses:* MSE, Binary Cross-Entropy, etc.
- **Published to PyPi** (`pip install showml`).

PYTHON TIME IT | VISUAL STUDIO CODE EXTENSION

- A Visual Studio Code extension to view the execution time of any Python function on the fly.
- *Tech Stack:* TypeScript, Python. Published to the *Visual Studio Marketplace*.

SCRIBBLENET | COMPUTER VISION & RESTFUL

- A Python package that classifies hand-drawn doodles into distinct classes using a **Convolutional Neural Network** ([Demo](#)).
- This package is bundled as a **REST API** using Flask (Python) and deployed on Heroku. Developed and published an **Android application** that uses this API ([Google Play](#)).
- *Tech Stack:* TensorFlow, Keras, OpenCV, Flask (Python), HTML, CSS/Bootstrap, RESTful API, Android (Java), Heroku.

EDUCATION

UPPSALA UNIVERSITY

SWEDEN | Aug. 2020 - June 2022

- **GPA 4.25/5** - Master's Degree in Computer Science (Specializing in Machine Learning and Image Analysis).
- **Teaching Assistant (Aug.- Oct. 2021):** Software Engineering and Project Management (1DL251).

NMIMS UNIVERSITY

INDIA | June 2017 - May 2020

- **GPA 3.19/4** - Bachelor of Technology in Computer Engineering.

ACHIEVEMENT

WINNER - SMART INDIA HACKATHON 2019 | INDIAN INSTITUTE OF TECHNOLOGY (IIT), ROORKEE

Nationwide Government Hackathon Consisting of Over 100,000 Participants

- Built an **Invoice Processing software** based on RPA using TensorFlow and Google Cloud ML Engine which could dynamically parse invoices in over 130 typed/handwritten languages.

TECHNICAL SKILLS

Programming Languages	Python, C++, Dart, JavaScript, TypeScript, MATLAB
Databases	MySQL, Firebase/Firestore (NoSQL), Neo4j (GraphDB), MongoDB (basic)
Web/App Development	HTML, CSS, Bootstrap, JQuery, AJAX, RESTful, Native Android (Java), Flutter
Backend Development	Flask, FastAPI
Machine Learning	TensorFlow, Keras, PyTorch, OpenCV, Scikit, spaCy
Containerization & other Tools	Docker (basic), Kubernetes (basic), Git, Postman