Daniyal Selani

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Education

- **Masters in Artificial Intelligence** — August 2020 – July 2022
  VU Amsterdam — *Amsterdam, Netherlands*
- **Bachelors of Science in Computer Engineering** — August 2014 – June 2019
  Middle East Technical University — *North Cyprus, Turkey*

Projects and Publications

- **Auto-Encoder Knowledge Extraction for Anomaly Detection Task**: Using co-activation graphs to represent knowledge learned by auto-encoders during training (ACM K-CAP conference 2021).
- **Exploration of Deep Learning Models for Integrating Log Data in Maintenance Classification**: Developing and evaluating novel transformer based language models for downstream medical device maintenance and diagnosis.
- **Boolean Logic Ensemble Method**: Hierarchical categories with a novel boolean logic ensemble classifier to overcome dataset limitations.
- **Can It Drive (CID)**: Modular self-driving system for use in virtual environments.

Experience

- **ING** — September 2022 - Present
  Data Scientists — *Amsterdam, Netherlands*
  - Designing a churn prediction system for evaluating the likelihood of customers leaving ING services.
- **Philips** — January 2022 - July 2022
  AI for Language Research Intern — *Eindhoven, Netherlands*
  - Developed novel transformer based language models for log data generated by medical devices for down stream predictive maintenance and diagnostic tasks.
  - Experimented with combining natural language information with machine generated data for predictive maintenance and diagnosis.
  - Facilitated social and career events for the intern community at Philips as a board member of the Philips Intern Committee.
- **VU Amsterdam** — November 2021 - July 2022
  Research Assistant — *Amsterdam, Netherlands*
  - Developed novel data pipelines to feed deep learning transformer based models for the task of epitope (protein-protein interaction) prediction.
  - Experimented with using coactivation graphs on transformer based model (OPUS-TASS) for interpretability.
- **OneByte** — September 2019 - December 2021
  Data Scientist — *Remote Work*
  - Developed back-end systems for identifying actionable findings and organ-specific abnormalities in patient screening and monitoring systems.
  - Developed SpaCy based natural language models for entity linking, recognition and extraction from medical documents.
  - Developed a natural language model to map medical procedure names from different hospitals to a standardized lexicon.
  - Implemented custom Prodigy based pipelines for model assessment by domain experts. The pipeline also included monitoring system that provides an overview of expert feedback and progress.
  - Developed a deep learning model for muzzle print identification of cattle using computer vision and few shot learning.
- **Paitoo** — February 2019 - September 2019
  Machine Learning Engineer — *Lahore, Pakistan*
  - Developed a recommendation engine for food centered social media app.
  - Developed an ensemble based hierarchical image classification model to automatically classify dishes in Paitoo database.
  - Developed, tested and maintained a system to identify and rank trending restaurants and items within the app.
  - Provided data driven insights about user behavior, to increase customer retention and satisfaction.

Skills

- **Proficient with**: Python - SkLearn - OpenCV - Pandas - TensorFlow - Git - Pytorch - Elastic Search - Linux - Pytoch - Spacy - AllenNLP
- **Have Knowledge of**: C++ - IoT Technology - C# - Azure - AWS - GCP - SQL

Selected Coursework

- Machine Learning
- Artificial Intelligence
- Experimental Design and Data Analysis
- Knowledge Representation
- Socially Intelligent Robotics
- Evolutionary Computing
- BioInformatics
- Multi-Agent Systems
- Data Mining
- NLP Technologies
- Machine Learning and Reasoning for Healthcare