Mehmet Burak Sayıcı

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Education

- **Bilkent University** — Ankara, Turkey
  Bachelor of Science in Industrial Engineering — *Sept. 2016 – June 2020*

Experience

- **Gesund AI** — Remote, Worldwide
  ML Engineer — *Sep 2021 - Present*
  - **Software Engineering**: One of the core developers of Gesund MLOps Platform that's focusing on medical context, which role allows to develop the medical AI experience for end to end clinical validation of the CNN models along with inherent support of medical data.
    Dockerization of ML Models/platform services with the integration to the web-app via FastAPI.
  - **ML Engineering**: Clinical Model Validation/Subcohort Analysis of Medical CNN Models for Classification, Object Detection, Instance/Semantic Segmentation Models. Created a dockerized service for model/data debugging that has dataset weakness/similarity analysis that uses DL techniques and frameworks.
  - **Platform Reliability**: Initialized Selenium and Jenkins repositories in order to maintain CI/CD pipelines.
- **Stanford University** — Mountain View, CA
  Undergraduate Visiting Research Internship — *Jan 2019 - Dec 2019*
  - **Research**: Worked on TCGA-LIHC Dataset for tumor classification. The effect of using multi field and CNN architectures which are Attention CNN and Multi Field of View CNN are analysed. Handled the data, coded the architectures at PyTorch and conducted all the experiments. GradCam methods applied for the models. Preprint published on ArXiv. Worked under supervision of Rikiya Yamashita, Prof. Daniel Rubin and Assistant Professor Jeanne Shen.
- **Çalık Energy** — Istanbul, Turkey
  Data Scientist — *Sep 2021 - Jan 2022*
  - **Data Science**: Created time series forecasting models mainly based on boosted tree algorithms for day-ahead electricity load forecasting of 7000+ subscribers.
    Created time series forecasting framework/OPS that registers models with parameters and features, stores, and daily, allows model selections on historical data validation, tracks/ensembles/selects features for daily model performance improvement and analyzes feature importances for models/predictions with SHAP/ELI5/LIME

Projects

- **Why** : Framework Agnostic Explainable AI Library for Computer Vision
- **Micro Milling Parameter Estimation**: Worked on Bayesian Learning application on prediction of the forces and tool life for the micro milling processes. Mathematical modeling of tool wear and Bayesian Parameter optimization is done with MCMC methods via PyMC3, under supervision of Prof. Yiğit Karpat.
- **A101 Discount Store, Dissertation Project**: largest discount store in Turkey, design and optimization of labouring processes via linear programming and performed linear regression analysis on prediction of required time on processes.
- **Poster for Bosphorus University-Ismail Arı Summer School 2016**: Summer School on Artificial Intelligence, "Application of "The All Convolutional Net" Principles on AlexNet Model: Simple Autonomous Car on GTA Vice City".

Teaching Experience

- **Makine Ogrenmesi Youtube Channel**: Tutoring on Applied/Theoretical Machine Learning/Deep Learning in Turkish and English. +13k subscribers with 600k+ views
- **Beyond MNIST Example: Practical Convolutional NNs on Udemy Practical Convolutional Neural Network Course in English**:

Academic

- **Analysis Of Multi Field Of View CNN And Attention CNN On HE Stained Whole-slide Images On Hepatocellular Carcinoma**: (Preprint), MB Sayıcı, R Yamashita, J Shen, D Rubin

Programming Skills

- **Languages**: Python, Matlab, R **Technologies**: MongoDB, FastAPI, Docker, RabbitMQ, Git, Linux, EC2