Hasan Burak Namli

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Software Engineer professional with 5 years of experience. Recently graduated from the master's program at Technical University of Munich Informatics Department which is in top 30 CS faculties worldwide. Currently pursuing applied Computer Science master's program at Maharishi International University. Proficient in software development, time series analysis and forecasting, natural language processing techniques and both relational/non-relational databases as well as distributed databases.

Key Technological Skills

- **Languages (& Frameworks)**: Python (Flask, Fastapi, Scikit-learn, NumPy, Pandas, Keras), JavaScript (Node, React), C# (ASP.NET), R, Java, C++
- **Databases**: MSSQL, PostgreSQL, MongoDB, Hadoop, Spark
- **Tools**: Unix Shell, Git, Docker, PyCharm, Qlik Sense, Jupyter Notebook, Streamlit, Kubernetes
- **Cloud Services**: Azure - Blob Storage, Data Factory, AWS - EC2, ECR, ECS, Fargate, S3
- **SDLC**: Agile Scrum

Experience

- **MeetCaregivers** — Newton, MA - USA
  Software Engineer — *Sep 2022 - Mar 2023 / 6 months*
  - **Software Development**: Implemented a dynamic pricing app where users can determine pricing of the caregiving service based on a Uber style dynamic pricing model. App is served through a UI and as a RESTful API with FastAPI. Automation of pricing projected to impact $\sim$ 10 case managers who controls 100s of caregivers.
  - **Technologies Used**: Amazon Web Services: ECS / ECR / EC2 / Fargate, Python, FastAPI, Streamlit, PyCharm, PostgreSQL, MongoDB, React.js, Docker
- **ImoGate** — Munich, Germany
  Software Engineer — *May 2021 - Jan 2022 / 6 months*
  - **Software Development**: Implemented a data management and processing platform back-end. Heavily used Pandas library for data processing operations. Wrote SQL queries, stored procedures and functions to integrate database operations. Wrote unit tests with PyTest. Contributed %8-10 of the codebase in 6 months.
  - **Technologies Used**: Azure Cloud Services: Blob Storage / Data Factory, Python, Pandas, PyTest, PyCharm, MSSQL, Docker
- **Siemens Healthineers** — Tarrytown, NY - USA
  Data Analyst — *Oct 2019 - Aug 2020 / 11 months*
  - **Data Analytics**: Developed and maintained 2 major reports - Product Performance and Sales Book which is consumed by upper management including C-level executives. The analytics and visualization of these reports provided with Qlik Sense. ETL processes of these reports developed with Qlik Sense's internal SQL like language
  - **Additional Tasks**: Attended digitalization meetings with various teams and lead a Robotic Process Automation Proof-of-Concept study. Supported a Text Mining with Machine Learning Proof-of-Concept study.
  - **Technologies Used**: Qlik Sense, Microsoft Office Tools, Microsoft Power Platform, Microsoft Excel, Python, Jupyter Notebook
- **Siemens** — Munich, Germany
  Data Scientist — *Jan 2019 - Sep 2019 / 9 months*
  - **ML Engineering**: Conducted research on state-of-the-art text mining and similarity algorithms. Implemented a Text Similarity Application which helps identifying similar malfunctions in the manufacturing process from the ticket description. The app is served as a RESTful API and word vector models were utilized in modeling.
  - **Additional Tasks**: Provided support to the Data Analysts on various problems ranging from extracting and processing reports on Siemens IT Auditing, preparing presentations for trainings, identifying Data Analytics use cases of individual business units.
  - **Technologies Used**: Python, Flask API, fastText, word2vec, gensim, Jupyter Notebook, Microsoft Excel and Office Tools

- **Arcelik** Istanbul, Turkey
  Data Scientist *Nov 2017 - Aug 2018 / 10 months*
  - **ML Engineering**: Developed a sales forecasting model for 10s of home appliance products. Analyzed statistical models and deep learning models on Jupyter Notebooks. Wrapped the models as a python package and infer the forecasts with batch execution. Created a dashboard with Qlik Sense and used MSSQL for data storage and query.
  - **Additional Tasks**: Took an active role for the upcoming Data Lake project. Performed research on Big Data frameworks and architectures. Attended to meetings and discussions with digital consultancy companies.
  - **Technologies Used**: Python, R, Jupyter Notebook, Keras, scikit-learn, Numpy, Qlik Sense, MSSQL, Elastic Search, Kibana
- **Biletbank** Istanbul, Turkey
  Software Engineer *Jun 2017 - Nov 2017 / 6 months*
  - **Software Development**: Contributed to the software development of a flight ticket booking and purchasing system which designed solely for corporations. Worked with Kendo UI on the front-end. Used the ASP.NET MVC Framework at the back-end. Solved tasks related to search feature in both frontend and backend.
  - **Technologies Used**: ASP.NET, MVC, C#, JavaScript, JQuery, Kendo UI, MSSQL

Education

- **Maharishi International University** Iowa, USA
  Master of Science in Computer Science *Jan 2022 –*
- **Technical University of Munich** Munich, Germany
  Master of Science in Computer Science *Oct 2018 – Jan 2022*
- **Istanbul Technical University** Istanbul, Turkey
  Bachelor of Science in Computer Engineering *Sept 2012 – June 2018*

Related Work

- **Master's Thesis (30/120 ECTS Credits)** Tarrytown, NY - USA
  at TUM Informatics Department & Siemens Healthineers Digital Finance Team *July 2021 - Jan 2022 / 6 months*
  - **Thesis Topic**: Monthly Revenue Forecasts of Healthcare Diagnostics Reagents and Instruments Using Explainable Artificial Intelligence
  - **Tasks**: Conducted a research on forecasting techniques, hierarchical forecasting and ensembling, explainability and interpretability of forecasting models, model robustness, evaluate techniques for generating robustness metrics. Implemented a hierarchical forecasting ensemble model utilizes models like ARIMA, ETS, Linear Regression, Decision Trees and Neural Networks. Created a dashboard with Streamlit which presents the historical data, forecasts, explainability and robustness related metrics.
  - **Conclusions**: Achieved less than 5% Mean Absolute Percentage Error on 2 major zones (out of 16 zones). Explainability is served through feature importance scoring. Observed less robust results during the pandemic.
- **Interdisciplinary Project (16/120 ECTS Credits)** Munich, Germany
  at TUM Chair of Financial Management and Capital Markets & Newgate) *Sep 2020 - Apr 2021 / 6 months*
  - **Project Topic**: Assessment of User Activity for the Indication of Price Movements in Capital Markets
  - **Tasks**: The goal of the project is the analysis of selected search queries and Wikipedia page view counts for the digital assets Bitcoin and Ethereum. Developed API connectors to retrieve data from Wikipedia and Google Trends API. Conducted correlation and causality analysis with user activity data. Used Pearson's correlation formulation. Analyzed Machine Learning algorithms and developed simple trading strategies with user activity data.
  - **Conclusions**: Strong correlations (%60-70) were observed between Google Trends data and Bitcoin Price data, similar level of correlations observed bidirectionally as well
- **Bachelor's Thesis** Istanbul, Turkey
  at ITU Faculty of Computer Engineering & Yapi Kredi Bank *Sep 2017 - May 2018 / 6 months*
  - **Thesis Topic**: Human Activity Recognition with Neural Networks
  - **Tasks**: Conducted research on state-of-the-art Deep Learning models LSTM (Long Short-Term Memory) and CNN (Convolutional Neural Network) for the task of activity recognition. The activities were drawing different shapes on a table while wearing Apple Watch by the user. The main goal was to enhance the biometric security in mobile banking. Retrieved signal data from Apple Watch sensors such as accelerometer and gyroscope. Processed the signal data and implemented neural network models for the classification task.
  - **Conclusions**: Achieved 70% accuracy in the test data. It is suggested to further develope the project with bigger amounts of data because of the risk of overfitting observed due to lack of data