Huseyin Serdar Kuyuk

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Skills

Programming Languages:	Python (Pandas, Numpy, Scikit-learn, flask), MATLAB, SQL, R, JavaScript
Tools & Packages:	Jupyter, TensorFlow, Keras, NLTK, spaCy, Github, AWS, Flask, API
ML Technical Skills:	Linear & logistic regression, classification, k-mean, artificial neural networks, Principal Component Analysis, Natural Language Processing, Support vector machine, sequence modeling (Long-Short Term Memory)
Domain Expertise:	Real-time seismology, time series analysis, signal processing

Experience

University of Delaware-Data Science Institute Newark, DE | **Jul. 2020 - Present**

- Created API for a text sentimental analysis using NLP by using Yelp, Weather, and IP API's implemented in Heroku
- Created two courses: Computer Literacy for bioinformatics, Databases for Bioinformatics.
- Provided support for two grant application +2M$ to NIH and NSF

Insight Data Science Fellow Boston, MA | **Jan. 2019 – May 2020**

- Developed a web app (YouCOOK) that searches and extracts ingredients of YouTube how-to-cook videos by applying Natural Language Processing using video captions so that users can scan videos by identified ingredients
- Trained a custom Named Entity Recognition model with the spaCy toolbox and deployed to AWS by Flask framework

Harvard University Scholar Boston, MA | **Sep. 2019 – Jun. 2020**

- Invented an index/algorithm that estimates earthquake intensity integrating amplitude and duration of shaking so that disaster agencies can estimate the destruction of disaster comprehensively
- Created a pipeline to analyze 120 GB of time series data and extracted features with Python

Bogazici University Researcher Istanbul, Turkey | **Apr. 2014 – Mar. 2016**

- Managed a project to reduce the real-time false alarm rate of earthquakes with a $140K budget funded by the European Union and delivered interim results and the final report on-time
- Implemented a software developed by our team at UC Berkeley, maintained and kept up-running on servers of the institution and statistically compared performance by testing, evaluating with two other software
- Wrote a grant proposal and received $97K as a principal investigator and contributed to obtaining another project with a budget of $186K from two government agencies

University of California, Berkeley Postdoctoral Fellow Berkeley, CA | **Sep. 2011- Sep. 2013**

- Led to release a large-scale reassessed version of new production-grade software on Earthquake Early Warning System in California (with a budget of $2M) which reduced false rate from 12% to 3% and extended the coverage area by 95% by maximizing software performance capabilities, improving both the speed of the processing and the accuracy
- Pioneered a classification filter that has never been undertaken before to separate 70 local or 23 non-local events which led 28% more accuracy
- Led three researchers on the performance of project by collaborating with two different groups at Caltech, California, and ETH, Switzerland resolving the conflicts of three competitive software with design difference using likelihood and parameter uncertainty estimates which result in reliable product with quantified uncertainty

University of Tokyo Postdoctoral Fellow Tokyo, Japan | **Sep. 2010 – Jul. 2011**

- Advanced a MATLAB software that calculates hundreds of thousands of earthquake ground motion by cutting execution time 20 times (from 1h to 3 min) by optimizing the algorithm for the non-life insurance association of Japan and boosted project deliverables on schedule
- Published three peer-reviewed journals on application of unsupervised pattern recognition algorithms using self-organizing maps, k-means, Gaussian mixture model, Linear and Nonlinear Discriminant Analysis for classification of seismic activities

Education

PhD in Earthquake Early Warning Systems and Artificial Neural Networks	Tohoku University, Japan	2008
MS in Structural Engineering and Artificial Neural Networks	Yildiz Tech. Uni., Turkey	2005