Tolga Recep Uçar

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github.com/tolgarecep

Skills

- **Languages**: Python, GNU Octave, Java
- **Libraries**: PyTorch, Tensorflow, Keras, scikit-learn, pandas, NumPy, seaborn, Matplotlib
- **Platforms and Tools**: Google Colab, Git

Interests

- **Machine Learning Interpretability**: Improving our understanding of machine learning models to make them more reliable, robust and insightful
- **Machine Learning Literacy**: Extending the deployment and accessibility of ML
- **Generative Models**: Imitating real world data
- **Vision Transformers**: This is an intriguing new research area after transformers' breakthrough in NLP

Education

- **Yıldız Technical University** Istanbul, Turkey
  Bachelor of Science - Mathematics; GPA: 3.16 *August 2020 - June 2024*
  Relevant Courses: *Mathematical Analysis, Linear Algebra, Probability and Statistics, Introduction to Computer Programming, Linear Programming, Differential Equations*

Work

- **Turkish Translation of Interpretable Machine Learning**: (In Progress)
  https://tolgarecep.github.io/interpretable-ml-book-tr/
- **GAN, Computer Vision, NLP Implementations**: Implementation of papers such as DCGAN (generating fake eye images), Explaining and Harnessing Adversarial Examples, Word2Vec, ResNet and Vision Transformer (ViT) and more
- **Data Analysis and Modeling on Big Five Personality Traits Datasets**: Analysis on two different datasets for big five personality traits and modeling of age, gender and etc. with machine learning algorithms
- **PyTorch Captum Contributions**: Contributing to open-source interpretability library Captum built on PyTorch

Writing (all available at tolgarecep.github.io)

- **Integrated Gradients (Interpreting BERT)**: Understanding how BERT answers a question given the text with the attribution method Integrated Gradients.
- **Can right facial cues reveal political orientation?**: About the research combining machine learning (computer vision) and psychology: Kosinski, M. Facial recognition technology can expose political orientation from naturalistic facial images. Sci. Rep. 11, 100 (2021)
- **Interpreting neuroscientific models**: Introduction to the DeepTune framework that visualizes what visual cortex neurons capture
- **Remote Monuments**: A portrait of culture clashes
- **Art writings**: About cinema and literature

Events

- **Attended to KUIS AI Open House event at Koç University**: We discussed various ML topics and papers.
- **Interview with Turkish Mathematician Ali Nesin**: Interview published in high school journal. Unfortunately absent on the internet.