Unat Tekşen

Istanbul, Turkey

Education

Kadir Has University

2018 - 2023 (expected)

Bachelor of Science in Computer Engineering, Full Scholarship

Istanbul, Turkey

GPA: 4.0/4.0

Experience

Koc University

June 2022 - Present

Research Intern Istanbul, Turkey

- Working at Koç University Cryptography, Security, and Privacy Research Group as an undergraduate researcher.
- Supervisors: Assoc. Prof. Alptekin Küpcü, Asst. Prof. Ercüment Cicek
- Working on implementation of novel defensive mechanisms against attacks in privacy-preserving machine learning systems. Specifically, working with split learning.
- Implemented anomaly detection models to detect and mitigate the impacts of a specific attack in a distributed and private deep learning model. Contributing as a co-author for a paper which is under peer-review.
- PyTorch, scikit-learn, NumPy, Pandas and, Matplotlib are used throughout the project.

ASELSAN

June 2022 - July 2022

Ankara, Turkey

Software Engineering Intern

- Worked at Department of Avionics Software which is responsible for designing and developing graphical user interface for
- Developed an interface for unit test which is integrated with GUI of the specific aircraft. Developed for acknowledging aircraft's protocol commands.
- C/C# are used throughout the project.

Kadir Has University

Nov. 2021 - June 2022

Research Intern

Istanbul, Turkey

- Worked on dimension reduction methods and graph-based manifold learning algorithms for open-source Sca-ML project. "Developing a New Method Based on Eigenvalue Distribution Slicing and Contour Integral for Manifold Learning and Analysis of Big Data" project is supervised by Asst. Prof. E. Fatih Yetkin.
- Implemented PETSc/SLEPc libraries and functions for the solution of eigenvalue problems in dimension reduction methods: PCA, SVD.
- scikit-learn, NumPy, Pandas, SciPy, PETSc/SLEPc, Matplotlib and, Plotly are used throughout the project.

Argenova Software Engineering Intern June. 2021 - July 2021

Kocaeli, Turkey

- Developed a content management system for company's blog and project pages.
- PHP, JavaScript, jQuery, MySQL, and, CSS are used throughout the project.

Preprints

- 1. Ege Erdogan, Unat Teksen, M. Salih Celiktenyildiz, Alptekin Kupcu, A. Ercument Cicek. "Defense Mechanisms Against Training-Hijacking Attacks in Split Learning", 2023; arXiv:2302.08618.
 - This paper is **under peer-review** for a journal.

Honor & Awards

Bachelor's Degree Scholarship

Sept. 2018-2023

• Merit-based scholarship for undergraduate education.

Top Ranked Student in Engineering & Natural Sciences (7 Semesters)

Jan. 2023

• Highest ranked student among the students in faculty of Engineering & Natural Sciences for 7 semesters.

TÜBİTAK Star Scholarship for Undergraduate Research Project

Dec. 2021-June 2022

• Selected by TÜBİTAK (Scientific and Technological Research Council of Turkey) and coordinators of the "Scalable Manifold Learning" research project as an undergraduate scholar for 6 months.

Professional Activities

Subreviewer at ESORICS 2023

• Reviewing papers about ML and privacy for European Symposium on Research in Computer Security 2023.

Projects

Skin Lesion Classifier with CNNs | PyTorch, scikit-learn, NumPy, Matplotlib, PIL

 $\bullet \ \ Github\ repository: \ https://github.com/robuno/skin-disease-classifiers$

Personal Blog Management System for Academics | PHP, MySQL, JavaScript, BootStrap, CSS

• Github repository: https://github.com/robuno/academics-blog-cms

Instagram Follower & Following List Scraper | Python, Selenium, Web Driver Manager

• Github repository: https://github.com/robuno/instagram-follower-following-scraper

Certificates & Courses

- 1) Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization | Credential
- 2) Neural Networks and Deep Learning | Issued by Coursera & DeepLearning.AI | <u>Credential</u>
- 3) CCNA: Introduction to Networks | Issued by Cisco | Credential
- 4) Machine Learning by Stanford University | Issued by Coursera & Stanford University | <u>Credential</u>

Skills & Technical Strengths

Human Languages: Turkish (nature), English (fluent), Italian (elementary)

Programming Languages: Python, Java, JavaScript, C/C#, PHP, Matlab, CSS

Frameworks/Libraries

Machine Learning/Data Science: PyTorch, scikit-learn, NumPy, Pandas, Matplotlib

Web Development: jQuery, React, Bootstrap

Other Technologies/Databases: MySQL, Tkinter, Swing

Typesetting: LaTeX

Activities

Social Media Content Creator & Designer

Kadir Has University Social Support & Solidarity Community

• Designing and creating content specific to regular announcements and events for social media platforms. Volunteering in the organization of charity events.