Yigit Efe Erginbas

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1725 Shattuck Avenue Apt 202, Berkeley, CA 94709

EDUCATION

University of California, Berkeley, Berkeley, CA. GPA: 4.00/4.00 — Aug 2021 – Present
Ph.D. in Electrical Engineering and Computer Science (expected May 2026)
Advisors: Kannan Ramchandran and Thomas Courtade

Bilkent University, Ankara, Turkey, GPA: 3.99/4.00 — Aug 2017 – Jun 2021
B.Sc. in Electrical and Electronics Engineering

PUBLICATIONS & PREPRINTS

Y. E. Erginbas, S. Phade, and K. Ramchandran, "Interactive learning with pricing for optimal and stable allocations in markets," *submitted to AISTATS 2023*, Oct. 2022

Y. E. Erginbas, S. Phade, and K. Ramchandran, "Interactive recommendations for optimal allocations in markets with constraints," *presented at 2022 INFORMS Annual Meeting*, May 2022. arXiv:2207.04143 [pdf]

Y. E. Erginbas, S. Vlaski, and A. H. Sayed, "Gramian-based adaptive combination policies for diffusion learning over networks," *IEEE ICASSP 2021*, June 2021. arXiv:2010.13104 [pdf]

RESEARCH EXPERIENCE

UC Berkeley, *Graduate Research Assistant* — Aug 2021 - Present
- Researching computational economics, machine learning, algorithms, optimization, and statistics.
- Investigating how to find preferable market outcomes while simultaneously learning the user preferences from interactively collected market data. Using techniques from reinforcement learning, collaborative filtering, optimal resource allocation and microeconomics to provide algorithms that can achieve provable guarantees.

École Polytechnique Fédérale de Lausanne, *Research Assistant* — Feb 2020 - Oct 2020
- Researched optimization, adaptive systems and networks for distributed learning.
- Investigated adaptive combination policies for diffusion learning over networks.

Bilkent University, *Research Assistant* — Feb 2019 - Jan 2020
- Investigated applying machine learning techniques to accelerate optimization algorithms.
- Proposed and analyzed recurrent neural network based quasi-Newton methods.

WORK EXPERIENCE

ASELSAN - BITES, *Research Engineer* — Oct 2020 - Aug 2021
- Participated in the research and development of IHTAR, a radar drone detection system.
- Worked on drone identification and tracking with signal processing and machine learning using PyTorch.

HAVELSAN, *Summer Intern* — May 2019 - Aug 2019
- Participated in the research and development of HAPSIM (Haptic Simulator).
- Worked on controlling a Stewart platform using path optimization algorithms and Q-Learning with TensorFlow.

TEACHING

Head TA for *CS 115: Introduction to Programming in Python* — Summer 2019 & Fall 2019

PROJECTS

Topology Identification and Community Detection from Graph Signals — Aug 2021 - Dec 2021
- Worked with graph filter models where the underlying graph shows community structure.
- Formulated multiple approaches that recover the topology and communities in the graphs.

Autonomous Vehicle for Target Detection and Localization — Sep 2020 - Jun 2021
- Senior Year Industrial Design Project in collaboration with ROKETSAN.
- Designed a self-driving vehicle that performs navigation and target detection using LIDAR and a stereo camera.
- Used computer vision and computational geometry to perform SLAM, segmentation and scene matching.

Meta-Learners for Few Shot Learning — Feb 2020 - Jun 2020
- Investigated few-shot training algorithms for various neural network architectures used in computer vision.
- Implemented meta-learning algorithms for few-shot training on PyTorch.

NOTABLE ACHIEVEMENTS

UC Berkeley EECS Departmental Fellowship	2021 – 2022
Bilkent University High Honor Rolls	2017 – 2021
KYK Merit Scholarship of the Republic of Turkey	2017 – 2021
Comprehensive Merit Scholarship of Bilkent University	2017 – 2021

SKILLS

Languages: English (fluent), Turkish (native)
Programming: Python (PyTorch, TensorFlow), Java, C++, MATLAB, Scala, SQL

VOLUNTEERING

Organizing CLIMB Evergreen seminar series	Mar 2021 – Present
Graphics and Design Coordinator at IEEE Bilkent student branch	Sep 2018 – Jun 2019
IEEE Bilkent student Branch executive board member	Feb 2018 – Jun 2021

HOBBIES

Cooking, squash, swimming, basketball, chess, video games, graphic design