Berk Tınaz
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Education

- **University of Southern California (USC)** — Los Angeles, CA
  Ph.D. Student in Electrical and Computer Engineering; GPA: 4.00/4.00 — *Aug 2020 – Present*
  Advisor: Prof. Mahdi Soltanolkotabi
- **Bilkent University** — Ankara, TR
  Bachelor of Science in Electrical and Electronics Engineering; GPA: 3.95/4.00 — *Sep 2016 – June 2020*
  Graduation Rank: 5/153
- **City University of Hong Kong** — Kowloon, HK
  Exchange Student in Electrical Engineering — *Jan 2019 – May 2019*

Journal Publications

[1] M. Yurt, M. Ozbey, S. Dar, **B. Tinaz**, and T. Cukur, "Progressively volumetrized deep generative models for data-efficient contextual learning of MR image recovery," *Medical Image Analysis*, 2021. [Online]. Available: https://arxiv.org/abs/2011.13913.

[2] M. Yurt, S. Dar, M. Ozbey, **B. Tinaz**, K. Oguz, and T. Cukur, "Semi-supervised learning of mutually accelerated MRI synthesis without fully-sampled ground truths," under revision *IEEE Transactions on Medical Imaging*, 2021. [Online]. Available: https://arxiv.org/abs/2011.14347.

[3] S. U. H. Dar, M. Yurt, M. Shahdloo, M. E. Ildiz, **B. Tinaz**, and T. Çukur, "Prior-guided image reconstruction for accelerated multi-contrast MRI via generative adversarial networks," *IEEE Journal of Selected Topics in Signal Processing*, vol. 14, no. 6, pp. 1072–1087, 2020. [Online]. Available: https://ieeexplore.ieee.org/document/9115255.

Peer-Reviewed Conference Publications

[4] M. Yurt, **B. Tinaz**, M. Ozbey, S. U. H. Dar, and T. Çukur, "Semi-supervised learning of multi-contrast MR image synthesis without fully-sampled ground-truth acquisitions," in *Medical Imaging Meets NeurIPS*, Virtual Conference, Dec. 2020.

[5] M. Yurt, S. Dar, **B. Tinaz**, M. Ozbey, Y. Korkmaz, and T. Cukur, "A semi-supervised learning framework for jointly accelerated multi-contrast mri synthesis without fully-sampled ground-truths," in *29th annual meeting of International Society for Magnetic Resonance Imaging (ISMRM)*, Virtual Conference, May 2021.

[6] M. Yurt, M. Ozbey, S. U. H. Dar, **B. Tinaz**, K. K. Oguz, and T. Çukur, "Progressive volumetrization for data-efficient image recovery in accelerated multi-contrast MRI," in *29th annual meeting of International Society for Magnetic Resonance Imaging (ISMRM)*, Virtual Conference, May 2021.

Honors and Awards

- **Machine Learning Summer Schools**: Accepted to CIFAR DLRL and MLSS summer schools, 2021
- **OpenCV AI Competition**: Finalist among 1400+ submissions, 2021
- **Bilkent University Graduate Research Conference (GRC)**: Best paper award for the publication "Semi-supervised learning of mutually accelerated multi-contrast MRI synthesis without fully-sampled ground-truth", 2021
- **USC Viterbi School of Engineering/Graduate School Fellowship**: Full tuition waiver & stipend during the first year of Ph.D. program, 2020
- **Bilkent University High Honor Student**: High honor student for 8 consecutive semesters, 2016-2020
- **Bilkent University Comprehensive Scholarship**: Full tuition waiver & stipend during the B.Sc. program, 2016-2020
- **Crossing Paths Internship Abroad Scholarship**: Selected as 1 of 6 people to receive financial aid for the internship abroad among thousands of applicants, 2018

- **IEEExtreme 11.0 Programming Competition**: Ranked 3^{rd} in Turkey, 39^{th} in IEEE region 8 and 116^{th} among all participants as a team of three, 2017
- **Turkish Intelligence Foundation (TZV) Marathon**: Ranked 11^{th}, 19^{th}, and top 20; 2017, 2018, 2020
- **Nationwide University Entrance Exam (LYS)**: Ranked 139^{th} among 2 million students in Turkey, 2016

Work Experience

- **Signal Analysis and Interpretation Lab (SAIL) at USC** — Los Angeles, CA
  Research Assistant — *Sep 2020 - Dec 2021*
  - Person image retrieval via attribute-based text query: worked on matching attributes extracted from both the text query and the target images.
  - Optic nerve photo analysis with ML: worked on distinguishing Psuedopapilledema vs Papilledema from optic nerve fundus images using supervised and self-supervised techniques, under the supervision of Prof. Shrikanth (Shri) Narayanan.
- **National Magnetic Resonance Research Center (UMRAM)** — Ankara, TR
  Undergraduate Researcher & Research Intern — *Oct 2018 - Apr 2020*
  - Integrating determinantal point process (DPP) sampling as an active learning technique to advance adversarial learning protocols.
  - Transfer learning to enhance generalizability and reliability of MRI synthesis by learning the mapping among different MRI datasets to standardize intensity differences.
  - Semi-supervised learning of accelerated multi-contrast MRI synthesis, undersampled across both contrast sets and k-space coefficients by leveraging randomized sampling masks across training subjects, under the supervision of Prof. Tolga Çukur.
  - Related concepts: Semi-Supervised Learning, Point Processes, Generative Adverserial Networks (GAN)
- **Imperial College London** — London, UK
  Research Intern at Intelligent Behaviour Understanding Group (iBUG) — *July 2018 - Sept 2018*
  - Contributed to the development of a novel audio-visual dataset, and detection of blinks and mouth openings in videos.
  - Integrated a face detection algorithm to an existing face alignment tool which increased the performance over 45° poses under the supervision of Prof. Maja Pantic and Dr. Stavros Petridis.

Teaching Experience

- **University of Southern California (USC)** — Los Angeles, CA
  Teaching Assistant — *Jan 2022 - Present*
  - EE562 Random Processes in Engineering: holding office hours and discussion sessions, preparing and grading homeworks and exams.

Skills

- **Language**: English (fluent, TOEFL iBT: 109/120), Turkish (native)
- **Programming**: Python, MATLAB, C/C++, R, LaTeX
- **Libraries**: PyTorch, Scikit-Learn, OpenCV, NumPy, Matplotlib

Extracurricular Activities and Hobbies

- **USC exploreCSR Workshop Series on Computational Media Intelligence (2021)**:
  - Mentoring undergraduates through workshop series in computational media intelligence sponsored by Google Research.
- **Bilkent IEEE Student Branch Active Member (2016-2020)**:
  - "Road to University" Volunteer (2016-2017): Introducing engineering and campus life to high school students from all around Turkey.
  - Graphics Design Team: Made several posters for the events organized by the student branch of IEEE.
- **Hobbies**: Playing the piano, Image editing/design (Photoshop), Travelling, Hiking/Camping, Reading, Trekking, Squash