Sahin Olut

E-mail : olut.sahin@gmail.com
Github: https://github.com/norveclibalikci
Mobile : +90-539-668-6690
Address : ITU Maslak Kampusu, Vadi Yurtlari C Blok Istanbul/Turkey
Personal page: olut.xyz

Education

- **Istanbul Technical University** — Istanbul, Turkey
  Bachelor of Science in Computer Engineering and Science; GPA: 3.32 (Top %10 of class) — *Sep. 2014 – June 2019*
- **Istanbul Technical University** — Istanbul, Turkey
  Minor in Applied Physics — *Sep. 2017 – Present*

Professional Experience

- **Kairos Future** — *Remotely* Stockholm, Sweden
  Data Scientist & Machine Learning Engineer — *July 2018 - Present*
  - Kairos Future is a management consulting and research firm that focuses primarily on strategic consulting, future planning and trend analysis. The consultees are notable firms of the Scandinavia.
  - Development of a cloud SaaS machine learning and data visualization platform using **Apache Spark**, **Python**.
  - Identification and research of various novel techniques for wide array of use cases.
  - Worked on mainly NLP and time series data. I used matrix factorization methods for outlier detection in text.
  - Built a Hidden Markov Model based delay predictor model for the railways of Sweden that reduced the operational costs by **4%**.
- **Virasoft** — Istanbul, Turkey
  Software Engineering Intern — *June 2017 - Aug. 2017*
  - Virasoft is a startup founded in September 2015, focuses on medical imaging and digital pathology. In particular, segmentation and classification of nucleus using image processing methods.
  - **OpenCV:** Implemented some medical versions of known image processing algorithms in OpenCV.
  - **Machine Learning:** For better diagnosis results, I implemented some ML techniques (Neural nets and SVM). It increased the accuracy of results by **2.5%**. (from 69%)

Research Experience

- **ITU Vision Lab.** — Istanbul, Turkey
  Undergraduate Research Member — *Aug. 2017 - Present*
  - Deep Learning research under the guidance of Prof. Gozde Unal and her Ph.D. students. At the beginning, I started working with GANs, I also studied about various tasks ranging from medical image segmentation to enhancing quality of satellite images. Additionally, I worked on development of some internal tools of the lab.
  - **National Liver Segmentation Hackathon:** In April 2018, Dokuz Eylul University held a Grand Challenge about liver segmentation in MRI images. Our team (including me) is ranked **first**.
- **ITU Computer Networks Lab.** — Istanbul, Turkey
  Volunteer — *June 2016 - Aug. 2016*
  - Done research about IoT Networks and Security, designed a IoT based social media project with my friends. While developing the product, Prof. Sema Oktug and RA Ahmet Aris supervised our team.

Teaching Experience

- **Istanbul Technical University** — Istanbul, Turkey
  Teaching Assistant — *Sep. 2018 - Present*
  - Prepared assignments for a **graduate-level** Deep Learning course which is offered by our lab using Jupyter Notebook, Python, Numpy and PyTorch. Additionally, I gave tutorials on how to use cloud services and a deep learning framework in their assignments.
- **ITU ACM Student Chapter** — Istanbul, Turkey
  Workshop Instructor — *Sep. 2018 - Present*
  - ITU ACM is a non-profit student organization that aims to unite the students who are interested in computer science and its subfields.
  - Each week, I prepare tutorial about a data science topic and together we discuss about it. The topics discussed are generally about data discovery, data cleaning, data visualization. I use many Python libraries to make the workshop more attractive and interactive.

Publications

- **Book Chapters:**
  - **Sahin Olut**, Yusuf Huseyin Sahin, Ugur Demir, Gozde Unal. (2018) Generative Adversarial Training for MRA Image Synthesis Using Multi-contrast MRI. In: PRedictive Intelligence in MEdicine. PRIME 2018 (**MICCAI 2018** Workshop). Lecture Notes in Computer Science, vol 11121. Springer, Cham
- **Conference Publications:**
  - **Sahin Olut**, Yusuf Huseyin Sahin, Ugur Demir, Gozde Unal. "Generative Adversarial Training for MRA Image Synthesis Using Multi-Contrast MRI". International Conference on Medical Imaging with Deep Learning (MIDL), Amsterdam, NL. July 2018. arXiv:1804.04366 – **Awarded with CIFAR Student Travel Grant**
- **On progress/in review:**
  - **Sahin Olut**, Yusuf Huseyin Sahin, Ugur Demir, Gozde Unal. "Generative Adversarial Networks for MRA Image Synthesis from Multi-modal MRI". **Submitted to IEEE Journal of Biomedical and Health Informatics**
  - Furkan Ozcelik, **Sahin Olut**, Hakan Kartal, Ugur Alganci, Elif Sertel, Gozde Unal. "Generalizable Pan-Sharpening GAN for Remote Sensing".

Projects

- **Zuber Telegram Bot (Freelance)** Allows touring employees of Zuber (zuberlezzetler.com/en/) to take photos and gather other information about grocery shops where Zuber products are sold. The bot has **250+ daily active users**.
- **ITU Enrollment Tracker** Allows students to be notified when there are seats available in a class. It is a chat bot integrated to Facebook Messenger API. Many students (**500+ in 2 days after release**) have used and benefited from app. It was a holiday project but it eventually gained vast attention from students.
  NodeJS and MongoDB are used in back-end service. Source code is publicly available on my Github.
- **ITUnder** Peer finder app for study groups. Tech stack: React.js, Python, Flask, PgSQL, NodeJS.

Honors & Awards & Talks

- I was interviewed on the Turkey's CNN channel about the my research in ITU Vision Lab.
- Did an introductory workshop about synthetic data generation in DeepCon'18 organized by Deep Learning Turkey.
- **CIFAR Travel Grant:** Granted by CIFAR for my work (Generative Adversarial Training for MRA Image Synthesis Using Multi-Contrast MRI) presented in MIDL 2018.
- **National Liver Segmentation Challenge:** Ranked **1st** place in using a variant of U-Net and preprocessing techniques.
- **IKU Code Night: 2nd** place. It is a 24 hours long online competitive programming challenge.
- **Getir-BiTaksi Hackathon 2018: 3rd** place with an app called 'Gotur'. Used Redis, NodeJS, MongoDB.
- **Dean's High Honor List:** 2018
- **METU Computer Club 20th & 21st Programming Contest Finalist:** Competed about 210+ teams to qualify the final round which took place in Ankara. Questions asked in contest are about competitive programming.
- **KU++ 2017 & 2018 Collegiate Programming Contest Finalist:** Competed about 180+ contestants to pass qualification round. NP-complete problems are asked to contestants for optimizing the solution.

Skills

- **Computer Science**: Algorithms, Deep Learning, Signal Processing
- **Programming**: Python, JavaScript, C, C++, SQL, Haskell
- **Environments and Frameworks**: PyTorch, Apache Spark, NodeJS, GNU/Linux, React.js, Git, LaTeX

Hobbies & Activities

- **Deep Learning Turkey** An incentive about raising AI awareness in Turkey. It has a large audience (**50k+ followers on social media**). I gave tutorials about GANs, Deep Learning Frameworks, Medical Image Analysis.
- Active member of ITU ACM Student Chapter, giving tutorials & workshops about Data Science.
- I have been playing bass for 3 years, done many gigs with my band. Also member of the board at ITU Music Club.
- Amateur portrait photographer.

References

- **Prof. Gozde Unal:** Full Professor in ITU, E-mail: gozde.unal@itu.edu.tr
- **Dr. N. Kemal Ure:** Assistant Professor in ITU, E-mail: ure@itu.edu.tr