



# Ahmet Serdar Karadeniz

SOFTWARE ENGINEER · RESEARCHER

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## Education

### Hacettepe Univesity

M.SC. IN COMPUTER ENGINEERING

- Thesis: Enhancement of Dark Images and Videos via Set-Based Learning

Ankara, Turkey

2018 - 2020

### Middle East Technical University

B.SC. IN MATHEMATICS

Ankara, Turkey

2012 - 2018

## Skills

### Programming

Python, Swift, Objective-C, C/C++

### Others

Unix/Linux, OpenCV, Scikit-Learn/Pytorch/Tensorflow, Flask, Git, Rest/JSON, MySQL, DigitalOcean/AWS/Bluemix

### Languages

Turkish, English

## Experience

### Ray Informatics

CO-FOUNDER & SOFTWARE ENGINEER

- Designed and developed computational photography apps that are downloaded by over 1 million people.
- Utilized recent state-of-the-art algorithms for image segmentation, colorization, super-resolution that run on mobile devices.
- Implemented several API microservices in Flask and deployed them to Digitalocean servers.
- Built applications for customers that enable users to see 360 virtual environments.

Ankara, Turkey

2017 - Present

### Hacettepe University Computer Vision Lab

RESEARCH STUDENT

- Researched methods to improve the quality of extremely low-light images.
- Learned reading research papers in machine learning by identifying key ideas, strengths, and weaknesses of the papers.
- Read and discussed recent papers with other research students in deep learning and computer vision.

Ankara, Turkey

2018 - 2020

### IBM

SUMMER INTERNSHIP

- Learned about IBM Watson AI and IBM Bluemix technologies.
- Developed a file transfer application with Python and Apache Kafka, deployed the application on IBM Bluemix.
- Contributed to a project that provides a restricted user-interface of a database to IBM customers.
- Developed an application that counts the objects passing through a production line by video processing with OpenCV/C++.

Ankara, Turkey

July. 2017 - August. 2017

### Microsoft

SUMMER INTERNSHIP

- Developed a computational tool for Linear Algebra as a Windows universal app.
- Gave a presentation about the project at the end of the internship.
- Taken accelerated education about various subjects such as software development and machine learning.

Istanbul, Turkey

Jun. 2015 - Jul. 2015

## Publication

### Burst Photography for Learning to Enhance Extremely Dark Images

SUBMITTED TO IEEE TRANSACTIONS ON IMAGE PROCESSING (UNDER REVIEW)

- Ahmet Serdar Karadeniz, Erkut Erdem, Aykut Erdem

2020

### Room-Level Indoor Localization with Artificial Neural Networks

MEDITERRANEAN CONFERENCE ON PATTERN RECOGNITION AND ARTIFICIAL INTELLIGENCE. SPRINGER, CHAM, 2019

- Ahmet Serdar Karadeniz and Mehmet Onder Efe

2019

## Improving CNN Features for Facial Expression Recognition

ZERO: JURNAL SAINS, MATEMATIKA DAN TERAPAN 3.1 (2019): 1-11.

2019

- Ahmet Serdar Karadeniz, Mehmet Fatih Karadeniz, Gerhard-Wilhelm Weber

## References

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### Assoc. Prof. Erkut Erdem

HACETTEPE UNIVERSITY, COMPUTER VISION LAB

### Assoc. Prof. Aykut Erdem

KOC UNIVERSITY, KUIS AI LAB

### Kurtulus Yildirim

IBM, ENGINEERING EXPERT LABS