# Sarp Özdemir

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# EDUCATION AND TRAINING

08/09/2018 – CURRENT – 4400 Vestal Pkwy E, Binghamton, NY 13902, United States, New York, United States **COMPUTER SCIENCE UNDERGRADUATE** – State University of New York Binghamton

3.56 https://www.binghamton.edu/

08/09/2018 - CURRENT - istanbul, Turkey

INFORMATION SYSTEMS ENGINEERING UNDERGRADUATE - Istanbul Technical University

3.45 http://www.itu.edu.tr/

01/09/2013 – 01/07/2018 – Istanbul, Turkey **HIGH SCHOOL DIPLOMA** – Uskudar American Academy

## WORK EXPERIENCE

17/08/2021 – 24/08/2021 – New York, United States

ORIENTATION ASSISTANT – STATE UNIVERSITY OF NEW YORK BINGHAMTON

I have helped new students at getting used to the university.

07/02/2021 – 28/02/2021 – Istanbul, Turkey

IOT INTERN – DATA MARKET BILGI HIZMETLERI A.S.

Worked on IoT products that keep track of inter-department requests by using m5Stack microcontrollers node-red backend and SQLite database.

24/09/2020 - 15/10/2020 - Istanbul, Turkey

**INTERN - SOFTTECH A.S.** 

Worked on distributed log tracing by use of Jaeger using the provided python lib together with the docker image provided for the UI.

Debugged code using Sonarqube.

20/07/2018 - 20/09/2018 - istanbul, Turkey

**DIGITAL SOLUTIONS EXPERT ASSISTANT - DATA MARKET BILGI HIZMETLERI A.S.** 

Developed AR and VR applications for use with marketing material. Developed apps for Microsoft Hololens by using Unity with Vuforia library.

08/07/2017 - 08/08/2017 - Istanbul, Turkey

MARKETING INTERN - DATA MARKET BILGI HIZMETLERI A.S.

Helped the marketing department prepare their digital material such as videos voice recordings and pamphlets.

10/08/2016 – 10/09/2016 – Istanbul, Turkey

INTERN - DATA MARKET BILGI HIZMETLERI A.S.

I have worked on procedural generation technology in the research and development department.

# LANGUAGE SKILLS

Mother tongue(s): TURKISH

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
GERMAN	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

# DIGITAL SKILLS

C++ | C | Nvidia Cuda | Java | OCaml | Python | Git | Linux | JSON | Windows | Compilers and language processing | Assembly for X86 | MIPS | GNU Bash | GCC | Computer Security | REST APIs | LaTeX | SQL | JavaScript | HTML | CSS | MySQL | Github | Postman | RESTful api

# PROJECTS

14/06/2020 - CURRENT

c2ocaml compiler - (research paper)

writing a new type of c compiler in order to eliminate buffer overflow class of attacks. This is a work in progress and will be subject to a research paper.

19/07/2020 - CURRENT

A PostScript Toolkit for Electronic Design - (workshop paper)

#### https://woset-workshop.github.io/PDFs/2020/a08.pdf

Wrote parts of the pstools library such as histograms, 3d vector graphics and pie charts. This library aims to provide a graphing interface for C which uses post script at its core. Source code can be found at: https://github.com/profmadden/pstools

19/07/2020 - 21/09/2021

Track Conventions, Not Attack Signatures: Fortifying X86 ABI and System Call Interfaces to Mitigate Code Reuse Attacks - (security analysis for research paper)

# https://sites.google.com/a/binghamton.edu/aravind/seed21.pdf?attredirects=0

Made the entire security analysis for a project which aims to reduce the attack surface for code reuse class of attacks. This will be subject to a research paper.

05/01/2020 - CURRENT

worked on layout issue for special purpose wafer scale chips

Used hardware acceleration to compute optimal sizes for kernel blocks for a FPGA like chip which is designed for deep learning.

# HOBBIES AND INTERESTS

**Vector Graphics** 

I enjoy creating low level programs to draw vector graphics for different environments. https://github.com/Ricider/simpleRender

## Compiler design

I like writing compilers and designing my own programming languages in my free time. <a href="https://github.com/Ricider/Cursed-Compiler">https://github.com/Ricider/Cursed-Compiler</a>

## **Functional programming**

I sometimes write throwaway code on Haskell when I am bored. I find Haskell more enjoyable compared to imperative languages because of its mathematical nature.

# SOCIAL AND POLITICAL ACTIVITIES

01/08/2019 - 01/12/2019

ITU Cins Ari (University LGBTQ+ community)

istanbul, Turkey

Took part in the club promotion stand of Cins Ari during the ITU clubs week.

Also took the symbolic role of treasury.

30/08/2019 - 14/06/2022

**TURCA at Binghamton University** 

New York, United States of America

Have been a part of the Turkish culture club at Binghamton University. I had the role of a video editor in 2019 and later on took the role of human resources in 2021.