HOUSSEM MENHOUR

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PERSONAL STATEMENT

Currently doing a MSc in Computer Science & Engineering at the University of Oulu, with a focus on AI. and I would love to combine that with a new professional challenge in a CV/ML related role. Prior to that, I worked for 2+ years as a Computer Vision Engineer at Visiomex where I built industrial quality control and automation systems.

I have a strong passion for R&D work, as well as excellent programming skills, mainly in C/C++, C# and Python which I have been honing for years by now. Being an active member of many student clubs and participation in several competitions allowed me to acquire good teamwork and leadership skills.

EXPERIENCE

07/2020 – 08/2022: Computer Vision Engineer at Visiomex

Tech stack*: C#/.NET, Python, MVTec Halcon, OpenCV, TensorFlow, PyTorch, Docker*

Designed, developed and deployed Computer Vision based quality control solutions for the automotive, home appliances and textile industries.

Lead the R&D efforts for the company's first 3D inspection solution using laser profiling technique and a robotic arm achieving a scanning resolution of <100µm.

Developed our first deep learning solution for anomaly detection (CAE, PaDiM), and deployed it for defect detection in steel sheets.

06/2018 - 12/2018: Research Intern at Kocaeli University

Tech Stack*: C/C++, Python, PyData stack, OpenCV, TensorFlow, ROS*

As an intern at the Image Processing Laboratory, contributed to ongoing research on Computer Vision for Autonomous Driving Vehicles, and Image Classification and Analysis.

01/2013 - 06/2014: Project Manager at Inelectronics Student Club

Designed and managed a WordPress website for the club's activities and news.

Organized events with student projects showcase and speakers from partner companies.

SKILLS

Technical Skills and Field Knowledge

Software Development:

Python ◆◆◆ | C/C++ ◆◆◇ | C# ◆◆◆

Databases (SQL, NoSQL) ◆◆◆ | Desktop Dev (Qt, WPF) ◆◆◆

Web Dev (Flask, FastAPI, ASP.NET) ◆◆◇

Computer Vision, Machine Learning and Data Science:

OpenCV ◆◆◆ | MVTec Halcon ◆◆◆ | PyData Stack ◆◆◆

XGBoost ◆◆◆ | TensorFlow ◆◆◇ | PyTorch ◆◆◇

Big Data Technologies:

Kafka ◆◆◇ | Spark ◆◆◇ | ELK Stack ◆◆◇

Other: Linux, Git, Docker, ROS, CUDA, MATLAB

Languages

Arabic: Native

English: Advanced, TOEFL 111

Turkish: Advanced, TÖMER C1

French: Intermediate

Soft Skills

Great communication and leadership skills

Analytical thinking

Self-motivated

Fast learner

CERTIFICATES

June 2020 – Data Analyst Nanodegree, Udacity.

February 2019 – Fundamentals of Deep Learning for Computer Vision Certificate, NVIDIA.

February 2019 – OpenZeka MARC Autonomous Vehicle Training Bootcamp.

February 2017 – IEEEXtreme Turkey Competitive Programming Camp.

EDUCATION

09/2022 - : Oulu University, MSc in Computer Science and Engineering, AI Track

09/2015 - 06/2020: Kocaeli University, Bachelor of Computer Engineering

Subjects include: ● Algorithm Analysis ● Software Engineering ● Design Patterns ● Neural Networks ● Big Data Analysis ● Distributed Systems ● Embedded Systems ● Control Systems

09/2014 - 06/2015: TÖMER, Turkish Language Preparatory Class

09/2012 - 06/2014: Boumerdes University, Institute of Electrical & Electronics Engineering

Subjects include: ● Circuit Analysis ● Digital systems with VHDL

PUBLICATIONS

H. Menhour, et al, "Searchable Turkish OCRed historical newspaper collection 1928–1942", J. Inf. Sci., Mar. 2021.

S. Eken, H. Menhour, et al, "A Reproducible Educational Plan to Teach Mini Autonomous Race Car Programming", *IJEEE*, Feb. 2020.

S. Eken, H. Menhour, K. Köksal, "DoCA: A Content-based Automatic Classification System for Digital Documents", *IEEE Access*, vol. 7, pp. 97996-98004, Jul. 2019.

ACCOMPLISHMENTS

July 2019 – Engineering Faculty Achievement Award from Kocaeli University.

November 2019 – 2nd place at AçıkHack NLP hackathon.

August 2018 – 1st place at Havelsan's Open Innovation Competition (PARDUS DoSA).

August 2014 - Fully funded scholarship from Turkey Scholarships Program.

June 2012 - Baccalaureate Exam with First Class Honours.

SELECT PROJECTS

09/2019 - 07/2020: ABVAG

Worked on data stream processing for my graduation project as part of a collaboration between CEVA Logistics and my department, this includes: building a geo data pipeline, stream processing with Apache Kafka and Spark, real-time anomaly detection.

06/2018 - 09/2019: FourPlusOne

Lead a team representing Kocaeli University at OpenZeka MARC competition for autonomous driving cars. We built a full system and implemented features for lane tracking, traffic signs detection and localization. Used technologies include Jetson TX2, ROS, TensorFlow, YOLO, OpenCV, Sensor fusion, Kalman filter, PID. https://github.com/fourplusone41

06/2018 - 09/2018: DoCA

Developed a program for automatic document classification and analysis covering text, images, audio and video file types. This project won 1st place at Havelsan Open Innovation Competition (PARDUS DoSA). https://github.com/husmen/DoCA_GUI

REFERENCES

Mr. Mert Safa Özkarakoç

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