Kaan **Keskinsoy**

Computer Science and Media M.Sc.

Contact




Languages

German (mother tongue)
Turkish (mother tongue)
English (fluent)

Skills

Programming Languages

Java · TypeScript · Python

C · C++

Databases

SQL · MongoDB

Web Technologies

Node.js · Express.js · Angular

HTML · CSS/SCSS

Docker

Mobile App Development

Android · Ionic

Machine Learning

PyTorch · Keras · Pandas

Tensorflow · Scikit-Learn · OpenCV

Education

Hochschule der Medien — 03/2019 - 09/2021
Stuttgart

Computer Science and Media (Master of Science)
Final grade: 1.2
Thesis: Machine Learning Methods for Facial Reenactment Creation and Detection

Hochschule der Medien — 03/2014 - 03/2019
Stuttgart

Computer Science and Media (Bachelor of Science)
Final grade: 1.9
Thesis: Android Mobility Detection Library

Universität Stuttgart — 10/2013 - 03/2014
Stuttgart

Computer Science

Staatliche Feintechnikschule — 09/2010 - 07/2013
Villingen-Schwenningen

General higher education entrance qualification
Final grade: 1.9
Major subject: Information technology

Work Experience

M-Way Solutions GmbH — 09/2016 - 03/2018
Practical semester and student trainee
Full Stack Developer

Development of B2E Web Apps:

- Client- and server-side development based on frameworks
- Design and implementation of user interfaces
- Development and consumption of REST interfaces
- Development of Unit- and E2E-tests
- Development of CLIs based on Node.js
- Deployment, operating and maintaining of Web Apps

Technologies:
Angular · Ionic · TypeScript · Node.js · SQL · Docker · HTML · CSS/SCSS

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Projects

Machine Learning Methods for Facial Reenactment Creation and Detection

2021

Development and optimization of machine learning models for generating and detecting DeepFakes:

- Development of an ETL pipeline for video-based datasets
- Development and optimization of a generative and a discriminative machine learning model
- Development of logging and monitoring procedures
- Data visualization and analysis of results

Technologies:
Python · PyTorch · Pandas · OpenCV · Matplotlib

Lab Work: Programming Intelligent Applications

2020

Implementation of selected applications from Artificial Intelligence and Machine Learning including:

- Data Mining
- Digit Recognition using Object Recognition
- Digit Generation using Generative Adversarial Networks
- Word Embeddings and Deep Neural Networks for Document Classification
- Deep Reinforcement Learning
- Time-Series Prediction using Recurrent Neural Networks

Technologies:
Python · Tensorflow · Keras · Scikit-Learn · Pandas · Gensim

3D Ken Burns Effect from a Single Image

2020

Implementation of the paper '3D Ken Burns Effect from a Single Image':

- Train models for estimating and refining depth maps from an still image
- Creating a point cloud of the input image and its estimated depth map
- Projecting images from the point cloud and inpainting color and depth
- Extending the point cloud by adding the inpainted values to the point cloud
- Creating the 3d effect from multiple images captured from the point cloud

Technologies:
Python · PyTorch · OpenCV · Pandas

Smart Penguins

2019

Development of a Car2x system for the prevention of traffic accidents based on a mesh network:

- Implementation of an Android app for exchanging BLE messages
- Transmitting BLE messages through the mesh network (FruityMesh)
- Implementation of an early warning system on current traffic events
- Dockerization of the software environment

Technologies:
C++ · FruityMesh · Android · Docker · nRF52 Development Kit · NordicSemiconductor Android-BLE-Library

Easy Grow

2019

Development of an automatic irrigation system for plants based on the Wi-Fi microchip ESP8266:

- Development of a web application for controlling the system remotely
- Interactions via a hardware interface and a web application
- Implementation of WiFi functions using Espressif IoT Platform
- Dockerization of the software environment

Technologies:
C · HTML · CSS · Docker · lwIP Netconn API · ESP8266 RTOS SDK · Espressiv IoT Platform

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Projects

Next Search

2019

Cloud based development of a scalable search application for compressed content rendering of web pages:

- Design and implementation of the cloud architecture and the web app
- Processing and aggregation of website content through Cloud Functions
- Caching of compressed contents
- Access Management of different Cloud Providers

Technologies:
Node.js · Angular · TypeScript · HTML · CSS/SCSS · Bing Search API · Google Cloud Functions · IBM Cloud Object Storage

Mobility Detection Library

2018

Development of an Android library for monitoring locations precisely and energy-efficiently, using smartphones' sensors, context information, and recognition of motion patterns:

- Data analysis for recognizing different motion patterns
- Analysis and optimization the power usage and the quality of monitoring, motion patterns, network, and charging informations
- Development of the architecture for using the library in multiple applications simultaneously

Technologies:
Android · JavaScript · Angular · Chart.js · Geofencing API · Fused Location Provider API

Autonomous Shuttle

2018

Drafting of an shuttle service for passenger transportation:

- Design and development of a web service architecture
- Design of an interactive ride through matching interests and recognizing emotions of the passengers
- Developing a booking system
- Interest matching through analyzing passengers' Instagram pictures
- Using facial recognition for authentication

Technologies:
Node.js · Express.js · MongoDB · Mongoose · Angular · TypeScript · HTML · CSS/SCSS · Docker · Watson Text to Speech · Kairos Face Recognition API · Google Cloud Vision API

Billtracker

2018

Development of native applications in Android and iOS for saving and synchronizing of receipts in firebase:

- Design and implementation of the firebase database and storage
- Design and implementation of the Android and iOS user interfaces
- Synchronizing data and receipts from Firebase
- Managing the locally saved documents in the file systems

Technologies:
Android · Swift · Firebase · Android Camera API · AVFoundation

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Projects

Crypto Currency Tracker

2018

Development of a Web App for comparing crypto currencies:

- Using functional programming language Clojure
- Generating HTML through Clojure library Hiccup
- Consumption of the 'CryptoCompare' API for retrieving currency rates
- Processing of the currency rates through Clojure
- Representing the currency rates visually through clj-xchart

Technologies:
Clojure · Leiningen · Luminus · Compojure · Hiccup · clj-xchart · CSS

WatchIt

2017

Development of a responsive Web App for retrieving movie and series information:

- Design and development of a web service architecture
- Design and implementation of an interactive and responsive web UI
- Consumption of 'The Movie Database' API
- Extending the web service enabling users to create accounts, watch, and favorite lists

Technologies:
Node.js · Express.js · MongoDB · Angular · TypeScript · HTML · CSS/SCSS · Docker

Cap'n Can Webshop

2017

Development of a web shop:

- Design and development of a web service architecture
- Design and implementation of an interactive and responsive web UI
- Administrative view for maintenance of the product line
- Implementation of the shopping cart and the booking process
- Implementation of sessions
- Prevention of security threats as XSS, XSRF, and SQL injections
- Using of SSL/TLS encryption

Technologies:
Node.js · Express.js · MongoDB · Mongoose · Angular · TypeScript · HTML · CSS/SCSS · Docker

Private Eye

2017

Development of mobile weather stations for capturing environmental data und visualizing those in a Web App:

- Design and development of a web service architecture
- Design and implementation of an interactive and responsive web UI
- Implementation of data exchange between embedded devices and web service
- Implementation of visual representation of the weather stations' locations

Technologies:
Node.js · Express.js · MongoDB · Mongoose · Angular · TypeScript · HTML · CSS/SCSS · Chart.js · Leaflet