JAKUB ZOLKOS

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Skills

Languages & Scripting: Python · C/C++ · HTML/CSS · JavaScript · SQL · Git · Bash · MATLAB · MIPS Assembly · Linux

Web Development: Django · Flask · PostgreSQL · React.js · TailwindCSS · Docker · Elasticsearch · Selenium

AI & Data Analysis: TensorFlow · Scikit-Learn · Pandas · NumPy · Matplotlib

Paradigms: Test Driven Development · Agile · REST

Experience

Engineering Product Innovation Center
Boston, MA

Backend Developer
01/2021 - Present

- Developed a web application with a student database for authorizing entry to the facility based on an online safety quiz, enabling migration from a file-based data storage system.
- Integrated the website with the employee clock-in system leveraging personal access cards.
- Implemented a student survey collection functionality and administrator panel in the application, allowing management to view visualized statistics of 1000+ past visitors.

BU VIP Laboratory
Boston, MA

Data Analyst & Research Assistant
02/2022 - 01/2023

- Collaborated with 5+ people in creating a state-of-the-art convolution neural network estimating room occupancy, leveraging a system of overhead fisheye cameras.
- Developed an optimized algorithm for producing smooth occupancy heatmaps, decreasing program runtime from 15 minutes to 10 seconds.
- Produced customizable people count plots from bounding box JSON data.
- Saved 3+ hours of weekly work for team members by simplifying data transfer between local and remote machines with an ensemble of Python and Bash scripts.

Projects

Portfolio Website
http://jakubzolkos.netlify.app

The first iteration of a personal portfolio website, written with React and TailwindCSS.

E-Commerce Product API

A product API with a sophisticated database for an e-commerce business, created with Django REST Framework, Elasticsearch and Docker.

Sobriety Detection API

A simple API that returns sobriety prediction leveraging a machine learning model performing spectral analysis of uploaded voice samples. Presented at Machine Learning in Poland Conference 2021: https://conference2021.mlinpl.org/accepted-talks-and-posters/

Recog

An Android application leveraging Google Vision API and a mobile phone camera to recognize objects and utter their name and position on the screen using text-to-speech, written with Kotlin, Flask and Google Vision API.

Education

Boston University
Boston, MA

Computer Engineering | GPA: **3.72** / 4.00
09/2020 - Present

- Machine Learning Concentration
- Dean's List (2020, 2021)
- Member of High Performance Computing Club and Data Science Club
- Software Engineering · Algorithms & Data Structures · Operating Systems · Computer Networking · Machine Learning · Statistics & Probability