Mihai Popescu

mpai.io@pm.me
+40723345494
linkedin.com/in/mihai-popescu-50744259
https://www.mpai.dev

Summary

Machine Learning Engineer at the University Medical Centre in Groningen (UMCG) specialized in building deep generative adversarial models. I am experienced with Tensorflow, Pandas, CV2, and other machine learning and data-processing frameworks.

Part-time DevOps Software Engineer building internal tools and web applications for handling the deployment of micro services on Azure. Deployment automation done via Azure DevOps, Docker, and Kubernetes with a focus on maintaining a healthy software development lifecycle and standard. Experienced with building production REST and GraphQL APIs. Experienced in building and scaling software for high-frequency data, typically using Kafka, Cassandra, and MongoDB.

Passionate about leveraging emerging technology in existing IT solutions and as such I have built a cryptocurrency running on a blockchain that rewards users for yielding computational resources to scientists that need it. The security and reliability of the cryptocurrency is assured by well-defined and standardised encryption and hashing schemes built into the blockchain implementation whenever jobs (transactions) are submitted by users.

The currency is currently under development. It currently supports currency transactions, wallet account creation via a GraphQL API for authentication using JSON web tokens stored in Redis. The project is in its early development and is currently closed source. For details about the project, please email me.

For an extensive list of my projects please visit my LinkedIn page (https://www.linkedin.com/in/mihai-popescu-50744259, Github (https://github.com/uberVelocity), or my self-built website in Vue.JS (https://mpai.dev).

Experience

Machine Learning Researcher

UMCG

Nov 2020 - Present (9 months +)

As part of my Master Thesis in the Artificial Intelligence program, I am collaborating with the University Medical Centre of Groningen in order to build synthetic data sets of endoscopy images containing polyps using generative adversarial networks (GANs).

Software Engineer

Jeemz Domotica

Mar 2020 - Present (1 year 5 months +)

Built cloud infrastructures deployed in Azure using Azure Kubernetes Service, Docker, and micro services built in Java, Python, and Go. Worked in a team that follows the agile methodology. Automated the deployment and testing of software using CI/CD pipelines within Azure DevOps, Github Actions, and Gitlab Runners. Experienced with test-driven programming, writing, and setting up functional unit tests.

Software that was built and deployed in Azure consisted of data warehouse solutions using both SQL and NoSQL databases. Existing REST APIs were re-written in GraphQL using Go to increase query flexibility for client-side applications. The infrastructure consisted initially of a data lake which transitioned to a lambda architecture. Compliance with third-party regulators was essential as fulfilling contractual obligations in mission critical pipelines implied building self-healing, fault-tolerant software. Using linux automation scripting alongside Kubernetes, I have improved the performance and stability of existing software. Confluence was used as a network discovery tool for existing services operating outside the Kubernetes cluster.

The tools that I am proficient and work with are: Docker, Kubernetes, Apache Kafka, Apache Spark, CassandraDB, Go, Java, Node JS+Express, Python, Linux, and Bash automation scripting.

Research Assistant
University of Groningen
Apr 2021 - Present (4 months +)
Built machine learning models of predicting COVID-19 infection rates using deep learning techniques trained on large datasets to estimate infection rates in countries where there is a shortage of data.

Teaching Assistant
AIMed
Apr 2021 - Jun 2021 (3 months)
Thought an introductory course on machine learning and Python to medical students to convey the applications of machine learning within the medical field.

Teaching Assistant
University of Groningen
Aug 2019 - Apr 2021 (1 year 9 months)
- Artificial Intelligence 2
Supervised labs and thought topics such as clustering techniques (K-means, self-organising maps, KNN), classification techniques (Bayes spam classification, Hidden Markov Models for voice recognition), data mining, neural network architectures, semantic data representation.

- Operating Systems
Thought the inner workings of the UNIX family of operating systems. Created assignments covering topics such as implementing different process scheduling strategies, building a shell that mimics Bash from scratch, Linux system management, networking in Linux, calling and tracking memory page allocations at the level of the kernel, and process creation.

Education

University of Groningen
Master's degree, Artificial Intelligence
2019 - 2021

University of Groningen
Bachelor’s Degree, Artificial Intelligence

2016 - 2019

International Computer Highschool of Bucharest
High School Diploma, Informatics
2012 - 2016

Licenses & Certifications

IELTS - British Council
Issued Sep 2015 - Expires Sep 2017

Baccalaureate

Skills

Kubernetes • Software Development • Docker Products • Go (Programming Language) • Linux • Microsoft Azure • Agile Methodologies • Microservices • Networking • Software Architecture

Honors & Awards

I-SWEEP - Gold Medal - Science Category - New Hybrid PV Cell Based on Organic and Biological Materials - USA - I-SWEEP
Jul 2015
The awarded project had the scope of achieving a new photovoltaic solar cell by means of organic and biological materials with the scope of promoting a cleaner environment by finding an alternative type of solar cell to silicon-based ones. The project was supervised by the Institute of Atomic Physics (Institutul de Fizica Atomica) in Romania.

Society of Petroleum Engineers - Gulf Coast Section - USA - Society of Petroleum Engineers
Jul 2015
The award was given at the I-SWEEP event for the insight of organic materials used in the study of band gaps in solar cells.

Genius Olympiad - Gold Medal - Increasing the spectral response of CdTe/CdS solar cells - USA - Genius Olympiad
Jul 2014
The awarded project aimed at increasing the spectral response of cells containing Cadmium telluride and Cadmium sulfide solar cells in order to increase the efficiency of light absorption of solar cells. The project was supervised by the Institute of Atomic Physics (Institutul de Fizica Atomica) in Romania