Marcus Pop
Senior Software Engineer

Technology-agnostic Senior Software Engineer with almost 5+ years of experience, with experience in various industries. I have built, mantained and improved complex systems and collaborated with teams across the globe. Currently in process of building my own digital product. I thrive in diverse and multi-disciplinary environments and enjoy researching solutions to complex problems. Passionate about all things data.

⊙ Cluj-Napoca/Timisoara, Romania

✉ marcuspopb@gmail.com

in marcus-pop (LinkedIn)

⌗ MarcusGitAccount (GitHub)

Work

Ai Build

SaaS cloud service for 3D printing

Senior Software Engineer

Jul 2023 – Mar 2024

London Area, United Kingdom, Remote

I wast part of the Additive Manufacturing team where I was the sole Software Engineer, responsible for improving the quality of the product, and implementing required features found during testing by the R&D engineers.

- Ran an ML experiment where I tried to use Graph Neural Networks to simulate cooling temperature during a metal print
- Designed, documented, tested, and implemented end to end a nozzle and material library in the existing software to help users get better initial prints with default material values
- Learnt ReactJS from scratch while on the job to create complex user interefaces
- Wrote or approved technical documents on system refactoring, best practices, setup guides, OTP auth, external system integrations, etc.

Self-employed

Contract Software Engineer

Sep 2022 – Mar 2023

Contractor for Anaplan on the Cloudworks project and another short term NFT avatar game project before release

- Worked on improving a data orchestration platform (built on top of Airflow) that transfers data between cloud platforms.
- Modeled various entities to capture the game state and economy using PostgreSQL, Liquibase, and Hibernate
- Ran Monte Carlo simulations to simulate in-game loot-dropping probabilities
- Implemented security and authorization using Keycloak, JWT, OAuth-based authentication, and Spring Security

Toptal

Software Engineer

Mar 2022 – Dec 2022
Remote

I had worked with two clients, both US-based start-ups.(one creating software documentation analysis tools using NLP models, and another one working on automated resume parsers for academia).

- Integrated Jira and GitHub external APIs into the application logic and tested those integrations using unit tests and mocked data.
- Helped the one client's team with various security issues, such as securing the stateless authorization system based on JSON Web Tokens using HTTP cookies
- Assisted one client's team in implementing a customizable email-based notification service.
- Implemented rules based on the output of deep learning models using spaCy and existing modules.
- Made use of the Aho–Corasick pattern matching algorithm to extract keywords from resumes

Montran Corporation

Software Engineer

Jul 2019 – Jun 2022
Cluj-Napoca, Romania

- Developed instant payment systems that allow banks' clients to send and receive money in almost no time. Worked on existing projects and different country-level implementations to add new features and requirements.
- Prototyped an automation tool that allows developers to record themselves while navigating and using a web application and replicate that flow in a test environment to ease front-end application testing.

- Created a tokenization algorithm with an instant payment system to hide sensitive card information. It uses a surrogate that is also Luhn-compliant instead of the actual account number.
- Developed together with a colleague the back end for an eWallet application connected to the national banking infrastructure via the instant payments system. Automated the clearinghouse, tokenization system, and central banking system.

National Instruments

Software Engineer Internship

Jul 2018 – Jul 2019

Cluj-Napoca, Romania

- Took part in the FPGA team that developed LabView NXG, a symbolic programming interface and environment used for developing engineering and research solutions that are meant to run on configurable hardware.
- Learned agile development and enterprise software design principles and procedures as part of my internship.
- Cooperated with the main team to integrate and test new features and maintain and fix previously written code.

Education

Technical University of Cluj Napoca

Computer Science
Oct 2017 – Jul 2021

Bachelor of Engineering - BE

Google Machine Learning Bootcamp

Deep Learning
Jul 2022 – Oct 2022

Bootcamp

Courses

- Deep Learning Specialization
- TensorFlow Developer Certificate

Projects

Home Assistant Dialogue Manager

Apr 2020 – Jun 2020

Microsoft Imagine Cup 2019 European Online Semifinals Entry

Nov 2018 – Feb 2019

COVID-19 Patient Survival Prediction

Car sharing analytics

Custom Redis server using TCP sockets

Microservices authentication using Keycloak

XML like programming language to handle vector operations
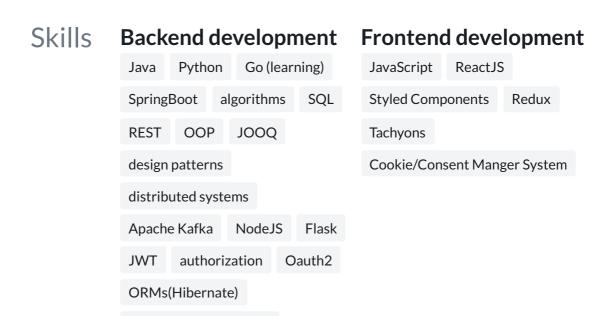
Certificates

Deep Learning Specialization
Issued by **Coursera**

TensorFlow Developer Certificate
Issued by **Tensor Community**

DeepLearning.AI TensorFlow Developer
Issued by **Coursera**

Skills

Backend development

Java   Python   Go (learning)

SpringBoot   algorithms   SQL

REST   OOP   JOOQ

design patterns

distributed systems

Apache Kafka   NodeJS   Flask

JWT   authorization   Oauth2

ORMs(Hibernate)

unit/integration testing

event-driven   monitoring

Docker   concurrency

Dropwizard

Frontend development

JavaScript   ReactJS

Styled Components   Redux

Tachyons

Cookie/Consent Manger System

AWS

CloudFormation   Lambda

DynamoDB   Step Functions

AI/ML/Data

TensorFlow   Pytorch

sklearn   sciPy   clustering

SQS   PostgresSQL   S3

CloudWatch   EC2   VPC

Athena   ECR   Cloudfront

API Gateway   Route 53   SES

LLM   Finetuning   RAG

NumPy   Pandas

data engineering   scrapping

Lex&Yacc

functional programming   FSM

data pipelines   quantization

Languages

English
Full Professional

French
Beginner

Romanian
Native Speaker