

# Iancu-George Verghelet

IOS DEVELOPER · WEB DEVELOPER · MACHINE LEARNING ENGINEER

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## Education

### Otto von Guericke University

Magdeburg, Germany

M.Sc. IN DATA KNOWLEDGE AND ENGINEERING

2018-2021

- Selected coursework - Deep Learning, Adv. Topics in ML, Data Mining II, Clean Code Development, Adv. Database Models

### Transilvania University

Brasov, Romania

B.Sc. IN APPLIED COMPUTER SCIENCE IN GERMAN

2015-2018

- Selected coursework - Object-oriented programming, Algorithms and Data Structures, Distributed Programming

## Skills

**Front End** iOS native (Swift), Angular (Typescript)

**Server-side** Nest.js (Typescript), .NET Core (C#), Spring Boot (Java), Ktor (Kotlin)

**Data analytics** Tensorflow, Scikit-Learn, Apache Spark, SQL

**Other tools** Git, Atlassian, Docker, Jenkins

**Languages** German (C1), English (C1), Romanian (native)

## Experience

### Bridgefield

Magdeburg, Germany

WEB DEVELOPER (STUDENT)

Feb. 2019 - Sep. 2020

- Successfully developed and deployed multiple web applications using **Angular**, **.NET Core** RESTful web services and the **OPC-UA** standard for the digitalization and data collection of a foundry for a major car manufacturer
- Was part of an agile and rigorous development process with an emphasis on code quality, consisting of multiple code reviews, high unit test coverage and a well-defined CI pipeline

### IBM

Brasov, Romania

IOS DEVELOPER

Sep. 2017 - Sep. 2018

- Implemented multiple new features for healthcare **iOS native applications** using **Swift** and the **MVVM** pattern for private health insurance companies from Germany

## Projects

### Explainable defect identification in X-rays of automotive parts using CNNs

Master's thesis

TENSORFLOW, PYTHON, SCIKIT-LEARN, WANDB

- Developed a machine learning pipeline and multiple custom **convolutional neural networks** for the identification of casting defects in real-world X-ray images using **tensorflow**, **WandB** and **scikit-learn** for a major car manufacturer
- Used explainable AI methods to visually highlight the potential defects in the X-ray images and achieved a 93% classification accuracy

### Soundtrace: audio copyright content management for Twitch streamers

Personal project

ANGULAR, NEST.JS, TYPESCRIPT, REDIS, POSTGRESQL, DOCKER

- Designed and implemented a web application that enables Twitch streamers to mute or delete videos that contain audio copyrighted material
- Developed using the public Twitch API, **Angular**, **Nest.js** and **redis** jobs for the downloading and fingerprinting of the audio content

### Database query optimization by partitioning for aggressive data skipping

Scientific team project

APACHE SPARK, APACHE LIVY, SPRING BOOT, DOCKER, JAVA

- Developed an API for **Apache Spark** using **Spring Boot** and **Apache Livy** that enables the partitioning of data for faster query times
- Achieved a 40% decrease in rows scanned by clustering the data based on the most used filters and skipping irrelevant partitions

### Pill Reminder: medication tracker & reminder iOS app

Internship project

IOS, SWIFT, FIREBASE, COREDATA

- Developed a **native iOS** application using **Swift** that enables the digital tracking and scheduling of medication plans
- User data was persisted both on the device and in the cloud using **CoreData** and **Firebase**

## Recommendations for similar Stackoverflow questions

*Bachelor's Thesis*

DJANGO, SCIKIT-LEARN, FLASK, GOOGLE APP ENGINE

- Developed a prototype recommendation engine that uses **collaborative filtering** to predict relevant questions and answers for Stackoverflow users
- Implemented using a **Django** webserver, a **Flask** REST server, both deployed on the **Google App Engine**

## Twitch open-source libraries

*Personal project*

TYPESCRIPT, KTOR, KOTLIN

- Implemented a *modern Kotlin library* that enables an easy interaction with the Twitch public API, using **Ktor** and **Dokka** with more than 10 Github stars
- Developed a **TypeScript** package that provides types support for the embeddable Twitch player with approx. 300 weekly downloads

## Certifications

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**Machine Learning** Coursera online course offered by Stanford University