Tudor Tolciu

Date of birth: 26 Aug 1997 | **Nationality:** Romanian | **Phone number:**

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Address: Cluj-Napoca, Romania (Home)

WORK EXPERIENCE

30 JUN 2017 – 31 AUG 2017 Cluj-Napoca, Romania
JAVA INTERN MHP – A PORSCHE COMPANY

WebApp development using Spring Boot, Hibernate and Angular in an agile environment.

30 JUN 2018 – 30 SEP 2018 Cluj-Napoca, Romania
SOFTWARE INTERN STRATEC BIOMEDICAL ROMANIA

Developed software for a medical laboratory instrument. Project involved .NET development, low-level firmware interfacing and Computer Vision.

1 OCT 2018 – 1 JAN 2020 Cluj-Napoca, Romania
DATA SCIENTIST MHP – A PORSCHE COMPANY

Developed an AI based HelpDesk assistant for ticket classification and feature extraction using Natural Language Processing and Machine Learning.

14 JUL 2019 – 1 AUG 2022 Cluj-Napoca, Romania
SOFTWARE ENGINEER STRATEC BIOMEDICAL ROMANIA

Developing software for a medical laboratory instrument. Currently working on an embedded image processing project with OpenCV using C#, C++ and Python.

1 AUG 2022 – CURRENT Remote, Germany
COMPUTER VISION ENGINEER MUETEC AUTOMATISIERTE MIKROSKOPIE UND MESSTECHNIK GMBH

Delivering comprehensive solutions for Computer Vision projects encompassing metrology, analysis, and inspection. Proficient in the development and implementation of sophisticated image processing algorithms utilizing OpenCV, proficiently executed in both C++ and Python environments.

EDUCATION AND TRAINING

30 SEP 2016 – 30 JUN 2019 Cluj-Napoca, Romania
BACHELOR IN COMPUTER SCIENCE Babeș-Bolyai University

Address Strada Mihail Kogălniceanu 1, 400000, Cluj-Napoca, Romania | **Website** http://www.cs.ubbcluj.ro/en/

30 SEP 2019 – 30 JUN 2021 Cluj-Napoca, Romania
MASTERS IN ADVANCED INFORMATION SYSTEMS Babeș-Bolyai University

Address Strada Mihail Kogălniceanu 1, 400000, Cluj-Napoca, Romania | **Website** http://www.cs.ubbcluj.ro/en/

LANGUAGE SKILLS

Mother tongue(s): **ROMANIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C2	C2	C1
GERMAN	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

C/C++ │ C# │ Python │ Machine Learning │ Artificial Intelligente │ Machine Learning and Deep Learning frameworks: Tensorflow, Keras, PyTorch │ Java Programming language │ Computer Vision │ OpenCV

ADDITIONAL INFORMATION

PUBLICATIONS

A Study in the Automation of Service Ticket Recognition using Natural Language Processing – 2019

Natural language processing (NLP) is a branch of computer science concerned with the understanding of human language and communication, and translating these into a computer-comprehensible embedding. Our goal in this paper is to capture meaning from human natural language through NLP and provide an automated solution for aiding the process of service ticket solving, through the intelligent classification of tickets, pattern recognition and similarities between texts. The difficulty of this task lies in translating the human language into a mathematical format: transforming a non-formal language, into a formal one, without losing any details. Also what raises even more complication is the context in which this language appears: service tickets, that come from a technical and specialized jargon of computer science and IT industry, and the brief manner in which the tickets are written. This paper aims to tackle this challenge through multiple methods of text classification and recognition, and data analysis, followed by comparison and interpretation of the results. In completion, we find that our methods yield plausible results to be implemented in helping the service process.

An initial study of feature extraction's methods in facial expression recognition – 2019

Facial Expression Recognition is a sub-branch of Affective Computing that specializes in extracting human emotions and facial features from visual input (images and videos) and tagging them to specific emotion hierarchies. The difficulty of this task lies not only in the subjectivity of distinguishing between human emotional states but, also in the diversity of the human race and culture that influences how we humans perceive sentiments. This article aims to tackle this challenge through two distinct methods of image processing, meaning automatic, Artificial Intelligence (AI) driven feature extraction and manual feature extraction through classical approaches and compare the performance of each of them afterwards. Our conclusion is, that both methods yield noteworthy results, and each specializes in a different context.

Analysis of Patterns and Similarities in Service Tickets using Natural Language Processing – 2021

In this paper we propose an approach for classifying documents, embedding documents into feature vectors and using these embeddings for finding similarities between them. Our chosen domain for applying this method is the IT-Service Support branch, where the documents we try to analyse are support tickets and the potential of classifying and finding patterns between tickets is huge for optimizing the service process. We aim to tackle the problem with multiple methods of text classification and recognition, and data analysis, followed by comparison and interpretation of the results. Following our previous work in this field, we propose further means of validating our models, so we can describe and visualize several methods of feature extraction and recognition for service tickets that help the business process for Service Support.

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