Dominik Stipić
Master of Science in Computing
10000 Zagreb, Croatia
dominikstipic@gmail.com
Mob. +385 099 634 9051
linkedin.com/in/dominik-stipic-769272196
github.com/dominikstipic/CV

Education

1/2024–WIP   Information Security, Faculty of Electrical Engineering and Computing, Zagreb, Croatia
10/2019–2/2022   MS Computer Science, Faculty of Electrical Engineering and Computing, Zagreb, Croatia
- Thesis topic: „Semantic segmentation of buildings in satellite imagery"
- Recommendation letter from prof. dr. sc. Siniša Šegvić
- Additional activities: Football sports section; Boxing; English language Courses; Communication skills;
    Programming Language R

10/2016–7/2019   BS Computer Science, Faculty of Electrical Engineering and Computing, Zagreb, Croatia
- Thesis topic: „Convolutional Models for Person Localization in Sports Broadcasts"
- Additional activities: Haskell, Java Programming Langage, Linux, Arduino and Rasberry PI workshops,
    Discrete & Continous Mathematics; CubeSat Satellite Section

Skills and Relevant Courseworks

- Technologies and Languages:
  - Java, Python
  - SQL, R, JavaScript, C, Haskell, C++, Linux
  - PyTorch, Tensorflow, Excel, Java EE, Docker, Node.js
- Skills: Writing and Communication; System Modelling; Presentation; Engineering mindset; Research
- Relevant Coursework: Algorithms and data structures; Machine learning; Text analysis and retrieval; Deep learning; Financial mathematics; Stochastic processes; Fuzzy, evolutionary and neuro computing; Discrete & Continous Mathematics; Software Design; Statistical Data Analysis; Operational Research

Industry Experience

1/2023-8/2023   Traineeship in Market Opearations, European Central Bank, Frankfurt at Main, Germany
- Market Operation Analysis / Market Operations Framework Section
- Technology: Python, Jupyter Notebook, Oracle Database, Tableau, Excel, Bloomberg, Dagster
- Highlighted Skills: Essentials of Monetary policy and Economy, Presentation skills, Communication skills,
    Data analysis, Research, Technology.

3/2022-9/2022 Software Engineer, Amphinicy Technologies, Zagreb, Croatia
- Software engineer for the satellite industry products [1].
- Technology: Java EE, WildFly server, Docker-compose, IntelliJ, Git
- Highlighted Skills: Software design and implementation, Managing large code base, technical documentation
    Written and oral communication, Learning domain specifics

3/2021-9/2021   ML engineer, PhishAR, Zagreb, Croatia
- Research and development of end-to-end ML pipeline for computer vision tasks.
- Technology: Python, Tensorflow, Git, Docker, Google Cloud Platform, Amazon Mechanical Turk
- Highlighted Skills: Project planning, Independence, communication

7/2019-9/2019   Student internship in data science/engineering, CROZ, Zagreb, Croatia
- Design algorithm for rearranging warehouse layout to increase its throughput.
- Technology: Python, Apache Spark, Oracle database, SQL
- Highlighted Skills: Project presentation, Data analysis and engineering, knowledge extraction

Academy Experiance

- 2020 Researcher, Text Analysis and Retreval Course, DSAA 2020 conference
  - Name: „Are you Human? Detecting Bots on Twitter Using Bert"
  - The paper is indexed in IEEE xplore and ResearchGate.
  - Model for text classification using BERT, feature exploration, exploratory data analysis of tweets
  - Presenting work on the online conference [2].
- 2020 University days event, 2020 [3]
  - Presenting my paper to potential students and answering student questions.
- 2019 Research assistant, FERsat project
  - The aim of the project was monitoring of light pollution from space.
  - The paper is indexed in IEEE xplore.
  - Remote satellite imaging systems, hyperspectral imaging, research on night-time multi-band image datasets, automatization and weekly presentation in front of professors

[1] Contributing to Amphinicy product - https://www.amphinicy.com/news-and-press/news/monica-v62-has-launched
[2] DSAA conference, Day 2 - http://dsaa2020.dsaa.co/technical-program/
[3] Smotra sveučilišta - https://smotra.fer.unizg.hr/?p=215

DIRECTORATE GENERAL MARKET OPERATIONS
MARKET OPERATIONS ANALYSIS DIVISION

ECB-RESTRICTED

Personal

14 July 2023

Letter of Reference

This is to confirm that Mr Dominik Stipić, born on 8 January 1997, worked at the European Central Bank (ECB) as Trainee in the Directorate General Market Operations, Market Operations Analysis Division, Market Operations Framework Section from 15 January 2023 until 14 July 2023.

The Market Operations Framework Section is headed by Ms Angelika Lagerblom. In addition to reporting to Angelika, Dominik also reported to and worked closely with various colleagues in the Section.

Over this period, Dominik contributed to a number of tasks of diverse nature. In particular, he
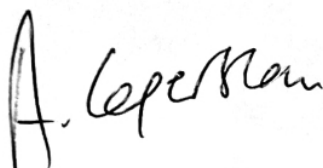
- took care of a number of regular tasks as well as ad-hoc queries carried out by the data management team of the Section, which also included extracting and analysing data from multiple data-sources in cooperation with experts, to be used in policy notes and briefings as relevant;

- contributed to the development and production of several regular or ad hoc reports and dashboards (using SQL and Tableau) on Eurosystem refinancing and eligible collateral data for all Eurosystem eligible counterparties;

- introduced automated techniques to optimise operational procedures and improved regular reports using VBA and Python programs;

- maintained, developed and tested functional databases; these activities also included functional as well as bugs' testing and fixing activities; and

- liaised with colleagues within the ECB and at National Central Banks (NCBs) on technical and procedural aspects related to his tasks.

In his day-to-day work, Dominik proved to be an involved learner in various topical areas of the Section and showed interest for financial market dynamics. He integrated well into the team. His friendly manner was appreciated by his colleagues and his data science skills were an immense asset to the team. He was accurate and efficient in his work during his time in the team.

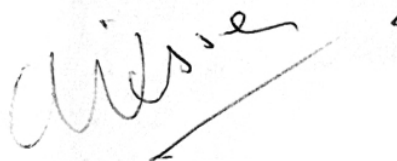Dominik displayed and further developed the following competencies:

- **Analysing:** he interpreted information and processed this to make proposals for amendments in the way we process information in an efficient manner and of high quality.
- **Team Orientation:** he worked co-operatively with others to achieve common goals by adopting an open attitude and sharing ideas.
- **Communication:** he gave and received relevant information and demonstrated willingness to ensure clear and common understanding.

We thank Dominik for his contribution to the ECB and the team and wish him all the best for the future both on a professional and personal level.

Angelika Lagerblom

Head of Section
Market Operations Framework

Ad Visser

Head of Section
Financial Markets and Collateral

Siniša Šegvić, Full Professor
University of Zagreb, Croatia
Faculty of El. Eng. and Computing
http://www.zemris.fer.hr/~ssegvic/index_en.html
sinisa.segvic@fer.hr

Zagreb, 25th February 2022

To whom it may concern

Dear Sir or Madam,

It is my pleasure to recommend Dominik Stipić as a candidate for engineering positions in machine learning and computer vision.

I have known Dominik since spring 2018, when he enrolled a BS seminar under my supervision in the 4th semester of his BS curriculum at UniZg-FER. His seminar addressed basic deep learning approaches for computer vision. In the next semester, he participated in a student project as a member of a group of ten students. Their goal was to implement basic procedures for elementary deep learning under Numpy and Pytorch. In his 6th BS semester, Dominik completed a BS thesis in the field of object detection. He studied the Mask RCNN architecture and applied it for detection of football players. The mask head was switched off, he used only the box regression output. Overall, the quality of that work was very good.

In spring 2021, he took an MS seminar on accelerated deep learning. In particular, he described experiments with multi-threaded loading and half precision inference. In spring 2022, he defended his MS thesis in the field of domain adaptation. He performed semantic segmentation experiments on INRIA buildings by leveraging Cycle GAN and CyCADA models.

In all mentioned activities Dominik was competent and self motivated. He has a working knowledge in machine learning approaches for computer vision. I therefore think that he is a competitive candidate for engineering positions in computer vision and machine learning. Please do not hesitate to contact me in case you have any further questions.

Sincerely,

Siniša Šegvić