Theodor Stoican

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Education

Dec 2021– July 2022 **École Polytechnique Fédérale de Lausanne**, Exchange student.
Worked on my Master's thesis as part of the Laboratory of Computational Neuroscience: **An Empirical Investigation of the Failure Mode of Training in Mildly Overparameterized Neural Networks**.

Oct 2019– Sept 2022 **Technical University of Munich**,
Data Engineering and Analytics, MSc.

Coursework: Master's practical course: Machine Learning for Natural Language Processing Applications, Master's seminar - Federated Learning in Healthcare, Guided Research, Introduction to Deep Learning, Machine Learning for Graphs and Sequential Data, Natural Language Processing, Business Analytics

Oct 2014– July 2019 **University Politehnica of Bucharest**,
Computer Science, BEng, GPA: 9.36/10 *(top 8%)*,
Artificial Intelligence, MEng.

Coursework: Data Structures, Algorithms, Calculus, Linear Algebra, Probability Theory, Artifical Intelligence, Machine Learning, Formal Languages and Automata, Operating Systems, Computer Networks, Compilers, Distributed Systems

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Experience

Oct 2022– Present **Software Engineer** , GOOGLE, Zurich, Switzerland.
○ Working on improving Search Ads via applied machine learning.
○ Languages and technologies used: **C++**, **Python**

Aug 2021– Nov 2021 **Software Engineer Intern**, GOOGLE, Zurich, Switzerland.
○ Worked on improving the scoring between user queries and advertiser keywords in Search Ads.
○ Managed to productionize an heuristic that improves the scoring with a recall and precision of more than 70%.
○ Languages and technologies used: **C++**, **Python**

Aug 2021– Nov 2021 **Software Engineer Intern**, GOOGLE, Zurich, Switzerland.
○ Worked on improving the scoring between user queries and advertiser keywords in Search Ads.
○ Managed to productionize an heuristic that improves the scoring with a recall and precision of more than 70%.
○ Languages and technologies used: **C++**, **Python**

Apr 2021– July 2021 **Research Intern**, HORVATH & PARTNERS MANAGEMENT CONSULTANTS, Munich, Germany.
○ Part of TUM Data Innovation Lab.
○ Implemented a BERT-based model that performs semantic search on top of a news dataset.
○ Experimented with and implemented a BERT-based model that performs topic modelling on top of the same dataset.
○ Languages and technologies used: **Python**, **Pytorch**

Nov 2020– March 2021 **Machine Learning Engineer Intern**, BLOOMBERG LP, London, UK.
○ Implemented a virtual intelligent assistant for the Bloomberg Transactional Cost Analysis team.
○ Languages and technologies used: **Python**

Aug 2020– Oct 2020 **Software Engineer Intern**, GOOGLE, Zurich, Switzerland.
○ Worked in YouTube Ads (mostly confidential).
○ Languages and technologies used: **Java**, **Dart**

May 2019– Sept 2019 **Software Engineer Intern**, BLOOMBERG LP, London, UK.
○ Implemented various algorithms for exploring the dependencies between calculations of financial data points.
○ Substantially improved analysis and debugging by implementing a graph tool for visualising these results.
○ Implemented a HR chatbot as part of an hackathon organized by the NLP guild.
○ Languages and technologies used: **C++**, **JavaScript**, **SQL**

Nov 2017– July 2018 **Research Intern**, UNIVERSITY POLITEHNICA OF BUCHAREST, Bucharest, RO.
○ Implemented a neural-network-based model that predicts the behavior of traffic participants.
○ Trained and fine-tuned the model and managed to predict lane change maneuvers with an error of 1.73 ft.
○ Languages and technologies used: **Python**, **Tensorflow**

June 2017–
Sept 2017
Software Engineer Intern, Bitdefender, Bucharest, RO.
- Improved the internal search engine by adding support for full-text search on top of the antivirus data.
- Designed a web service for detecting anomalies within the antivirus data feeds. Optimized the service via caching.
- Enhanced the data analysis carried out in the company by implementing a UI to visualise anomalies.
- Languages and technologies used: **Node JS**, **ElasticSearch**, **Cassandra**, **Angular JS**

Oct 2016–
May 2019
Undergraduate Teaching Assistant, University Politehnica of Bucharest, Bucharest, RO.
- Courses: Formal Languages and Automata, Object-Oriented Design(**Java**), and Algorithm Design(**C++**, **Java**).
- Taught laboratory classes, created materials for weekly tests, midterms, and designed assignments for students.

Projects

2020 **Word2Vec [Code]**, *School project*.
Skip-Gram implementation of Word2Vec. **Python**

2018 **efficientize [Code]**, *Self-motivated*.
Open source web application that tracks the user's activity (time spent in various apps and the number of keystrokes) in order to quantify their productivity. **Python**, **Plotly**

2017 **Pong AI [Code]**, *School project*.
A version of Pong with a built-in AI based on Q-learning. **Python**, **Pygame**

Awards

Sept 2018 **Honorable Mention**, *ACM ICPC - National Phase*.
Qualified for the national phase, alongside other top teams from Romania. Scored in the top 25 out of 62.

May 2017 **Karma Award**, *University Politehnica of Bucharest*.
1st out of 400 students for outstanding activity during the Operating Systems course.

Oct 2014–
June 2018
Academic Scholarship, *University Politehnica of Bucharest*.
Earned a scholarship from university each semester for outstanding academic results.