

Victor Pădurean

📍 Saarbrücken, Germany ✉ vpadurea@mpi-sws.org 🔗 vicondrus.github.io in victor-padurean 🌐 vicondrus

Basics

Ph.D. Student at Max Planck Institute for Software Systems

Interests: Artificial Intelligence, Generative Models, Large Language Models, Multimodal Models, Deep Learning, Benchmarking Generative Models, AI-driven Education, Educational Content Generation

Education

Ph.D. Max Planck Institute for Software Systems/Saarland University, Germany Sep 2021 – ongoing
Computer Science

- **Supervisor:** Prof. Adish Singla
- **CS@max planck** program

B.Sc. Technical University of Cluj-Napoca, Romania Oct 2017 – Jun 2021
Computer Science

- **GPA:** 10.0/10.0
- **Thesis:** Thermal Flexibility Estimation for Server-Heaters
- **Advisor:** Dr. Marcel Antal

Selected Publications

- [1] **Victor-Alexandru Pădurean** and Adish Singla. Benchmarking Generative Models on Computational Thinking Tests in Elementary Visual Programming. CoRR, abs/2406.09891, 2024. *Note: accepted at NeurIPS'24 D&B*
- [2] **Victor-Alexandru Pădurean**, Paul Denny and Adish Singla. BugSpotter: Automated Generation of Code Debugging Exercises. Accepted at the Technical Symposium on Computer Science Education (SIGCSE), 2025.
- [3] **Victor-Alexandru Pădurean**, Georgios Tzannetos, and Adish Singla. Neural Task Synthesis for Visual Programming. In Transactions on Machine Learning Research (TMLR), 2024.
- [4] Tung Phung, **Victor-Alexandru Pădurean**, Anjali Singh, Christopher Brooks, José Cambronero, Sumit Gulwani, Adish Singla, and Gustavo Soares. Automating Human Tutor-Style Programming Feedback: Leveraging GPT-4 Tutor Model for Hint Generation and GPT-3.5 Student Model for Hint Validation. In Proceedings of the Learning Analytics and Knowledge Conference (LAK), 2024.
- [5] Tung Phung, **Victor-Alexandru Pădurean**, José Cambronero, Sumit Gulwani, Tobias Kohn, Rupak Majumdar, Adish Singla, and Gustavo Soares. Generative AI for Programming Education: Benchmarking ChatGPT, GPT-4, and Human Tutors. In Proceedings of the Conference on International Computing Education Research (ICER) - Volume 2, 2023.

Work Experience

Linnify, Data Scientist Romania
Oct 2020 – Nov 2022

- Worked on an early project.
- Responsibilities include researching and developing approaches for correlating workplace data with employee stress levels.

Linnify, Backend Developer Intern

Romania
Jul 2020 – Aug 2020

- Responsibilities include developing and deploying an internal tool for project managing and socializing under the scrum framework.
- Employed technologies used include Python, Django, PostgreSQL Bitbucket Pipelines, Docker, Google Cloud Services.

Montran Corporation, Full Stack Developer Intern

Romania
Jul 2019 – Aug 2019

- Responsibilities include developing a banking web application.
- Employed technologies include Java, Java Spring, MySQL, MongoDB, Maven.

Skills

Programming: Python, JavaScript, Java, C, SQL

Machine Learning Frameworks: PyTorch, Tensorflow/Keras, HuggingFace Transformers

Data Science Frameworks: Pandas, NumPy

Development Frameworks: Django, React, Spring

Miscellaneous: Git, Docker, Linux, \LaTeX

Soft Skills: Highly Self-motivated, Collaborative Team Player, Excellent Communicator, Efficient Time Manager, Creative Problem-solver, Skilled Presenter, Strong Academic Writer

Honors/Awards

Valedictorian, Computer Science – English Study Program, Technical University of Cluj-Napoca, 2021

Teaching

Generative AI, Saarland University
Teaching Assistant

Winter Semester 2024/25

Advanced Course on Reinforcement Learning, Saarland University
Teaching Assistant

Winter Semester 2022/23

Data Networks, Saarland University
Teaching Assistant

Summer Semester 2022

Languages

Romanian: Native

English: Proficient (C2)

French: Intermediate (B1)

German: Beginner (A1/A2)