Paul Setinek

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Education

- **Imperial College London** — London, United Kingdom
  Master of Science in Applied Computational Science and Engineering — *Oct 2022 - Oct 2023*
  - **GPA**: distinction
  - **Relevant Coursework**: Advanced Programming, Computational Mathematics, Data Science & Machine Learning, Deep Learning, Modelling and Numerical Methods, Inversion and Optimisation, Patterns in Parallel Programming
- **Vienna University of Technology** — Vienna, Austria
  Bachelor of Science in Mechanical Engineering - Management — *Oct 2017 - Jun 2022*
  - **GPA**: 1.9 (1-5, with 1 being best)
  - **Relevant Coursework**: Mathematics, Mechanics, Control Engineering, Fluid Mechanics, Statistics, Management, Finance and Optimisation

  Extension Program Bachelor "Digital Skills" — *Mar 2021 - May 2022*
  - **GPA**: 1.4 (1-5, with 1 being best)
  - **Relevant Coursework**: Foundations of Information Systems, Data Analysis and Visualisation, Security and Privacy

Professional Experience

- **Vienna University of Technology** — Vienna, Austria
  Teaching Assistant - Continuous Simulation — *Feb 2021 - Nov 2022*
  - **Responsibilities**: Organised and held programming exercises for up to 200 students and supervised groups with individual projects.
  - **Taught Coursework**: Modelling and Simulation, Numeric Algorithms, solving ODEs and discrete difference equations using Matlab/Simulink and Python
- **ALRAG** — Vienna, Austria
  Asset Management Intern at a large Austrian real estate company — *Aug 2020 - Nov 2020*
  - **Software Development**: Developed software to automatically extract data from various websites using Python, Beautiful Soup and pandas in order to identify potential properties for the acquisitions team. Created and maintained an executable, which increased efficiency in the scoping process by 25%.
  - **Managing Responsibilities**: Responsible for managing and evaluating real estate projects (DCF method combined with qualitative analysis of buildings) and preparing portfolio reports for internal and external use together with the board.

Relevant Projects

- **Independent Research Project** — London, United Kingdom
  "Application of Neural Radiance Fields (NeRFs) in visual based subsea maintenance" — *May 2023 - Oct 2023*
  - Collaboration between Imperial College London & Aker BP.
  - Implemented a NeRF model tailored to the subsea domain.
  - Yielded better visual performance metrics and 68% decrease in training time compared to state-of-the-art subsea model.
  - https://github.com/AkerBP-DataOps/seathru_nerf
- **Bachelor's Thesis** — Vienna, Austria
  "Equity returns and sample size - impact on optimal portfolios" — *Jan 2022 - Jun 2022*
  - Investigated the impact of the sample size used for parameter estimation on the out-of-sample performance of optimal portfolios.
  - Implemented a parallelised Monte Carlo simulation study and executed it on the Google Cloud Platform.
- **Continuous Simulation Publication** — Vienna, Austria
  ARGESIM Benchmark C7: Constrained Pendulum — *Jun 2020 - Nov 2020*
  - Collaborated with colleagues to implement an educational benchmark simulation of a constrained pendulum in Matlab and on the E-Learning Server of the Technical University of Vienna.
  - Grujic, M., Haupt, J., Hossain, Y., Klimon, L., Setinek, P., & Breitenecker, F. (2021). ARGESIM Benchmark C7: Solution in MATLAB Environment and Integration into TU Vienna's MMT E-Learning Environment. Simulation Notes Europe SNE, 31(4), 239-254. https://doi.org/10.11128/sne.31.bne07.10589

Skills Summary

- **Programming Languages**: Python (relevant libraries: NumPy, SciPy, pandas, matplotlib, seaborn, BeautifulSoup, devito, scikit-learn, xgboost, PyTorch, langchain, nerfstudio), Matlab, C++, SQL, bash scripting
- **Tools**: Git, VS Code, Simulink
- **Languages**: German (native), English (fluent) and French (intermediate)
- **Certifications**: TOEFL (113/120), Hugging Face "Deep Reinforcement Learning Course", Coursera "Hands-on machine learning with AWS and NVIDIA", SAP Certificate, "Real Estate Economics and Finance" Program at LSE