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Simen van Herpt

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Experience

Software Engineer *Utrecht, the Netherlands*
EpicFlow *Jan 2022 – Present*

- Developed software for simulating and automating multi-project resource management environments.
- Collaborated with two leading researchers in the field to develop, test, and visualise new metrics for evaluating project portfolios in order to increase the flow of work with the existing staff.
- Built a full-stack web application using Vue.js and MongoDB to create a serious game that lets users simulate and analyse decision outcomes interactively. Used as a training tool to address growing operational challenges in the defence sector, including by the Ministries of Defence in the Netherlands and the UK.

Research Assistant *Utrecht, the Netherlands*
Utrecht University *June 2020 – Jan 2022*

- Contributed to the development of PROVEE (Progressive Exploration of Embedding Spaces), a flexible system supporting the progressive analytics paradigm for efficient exploration of large datasets.
- Responsible for designing and implementing a language-agnostic microservice and contract-based architecture, significantly enhancing PROVEE's flexibility, extensibility, and scalability for future development.
- Developed microservices for flexible visualisations and modular analytics, such as semantic reasoning with kNN trees, and demonstrated its potential through a Natural Language Processing case study.
- Delivered 47% faster dataset loading than Parallax and 35% faster than TensorFlow EP when processing the 50D GloVe dataset with 1.2 million points by distributing computation across multiple instances.

Education

MSc in Artificial Intelligence *Utrecht University* *Sept 2020 – Mar 2025*

- Double Master's honours programme, Graduated cum laude: 8.9/10.0

MSc in Computer Science *Utrecht University* *Sept 2020 – Mar 2025*

- Double Master's honours programme, Graduated cum laude: 8.8/10.0

BSc in Computer Science *Utrecht University* *Sept 2017 – Aug 2020*

- Graduated cum laude: 8.2/10.0

Projects

Learning Complementary Latent Representations *svherpt.github.io/latentRepr*

- Extended the Predictive Encoder-Decoder architecture by splitting latent representations into local and global components, improving performance in environments with unmeasurable disturbances.

Simulating Crowds in Real Cities *svherpt.github.io/crowdsimulation*

- Integrated multiple crowd simulation software tools with cadastral data and road maps to simulate crowd movement in 3D environments of real cities, providing insights for event planning and infrastructure design.

Technologies

Languages: C++, C#, JavaScript, Python, Haskell

Technologies: .NET, Docker, gRPC, Git, Tensorflow, NumPy, MongoDB, OpenCV, Git, Vue, D3.js, Unity

Hobbies and Activities

I play hockey, chess, and spent a few years rowing. I also helped organize events, such as ski trips and tournaments.