Vincent Hilla

Computer Science M.Sc.

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vinhill.github.io

Bergdriesch 7,
52062 Aachen

Languages

German native

English C1

Skills

Programming C++, Python, JavaScript, Prolog, SQL, LaTeX

Machine Learning Numpy, Matplotlib, Seaborn, Keras, Tensorflow

Web Development JavaScript, Node.js, Express, Angular, React, Jest, HTML, Web Standards

Non-Technical Remote Working, Spec Writing, Asynchronous & Written Communication, Self Management

General Git, GDB, RR, Pernosco, Linux, Ubuntu, MS Office, Drivers Licence

Education

Computer Science M.Sc. (∅ 1.0) Apr. 2022 – Sep. 2024 — RWTH Aachen

Exchange Semester Aug. 2022 – Dec. 2022 — Aalto University

Computer Science B.Sc. (∅ 1.1) Oct. 2018 – Mar. 2022 — RWTH Aachen

Exchange Semester Aug. 2020 – Dec. 2020 — Aalto University

Abitur / Higher Education (∅ 1.0) till Jun. 2018 — Michael-Ende-Gymnasium

Experience

Software Engineer, DOM Core — Mozilla

Dec. 2024 – today

Advancing web standards and browser interoperability.
Contributing to the long-term effort of changing the initial `about:blank` behaviour in Firefox.

● C++ ● JavaScript ● Web Standards ● Spec Writing

Master Thesis on Human Pose Estimation (1.0) — RWTH Aachen

Oct. 2023 – Jul. 2024 ● 9 months

Improved the temporal consistency of a 3D pose predictor using a deep learning model and by analysing prediction biases.

● Python ● PyTorch & TensorFlow ● Data Analysis ● Signal Processing

DOM Core Student Worker — Mozilla

Apr. 2023 – Jul. 2024 ● 1 year 3 months

Contributed to Firefox with C++ and JavaScript, advancing web standards and compatibility. Implemented features like Screen Wake Lock API and Capability Delegation, and improved forms/events handling.

Research Assistant High-Speed-Microscopy — Fraunhofer IPT

Mar. 2021 – Jul. 2022 ● 1 year 5 months

Maintained a parallelised C++ library for microscope control.
Improved the software architecture and fixed bugs, modernised the code, and implemented new features for faster scanning. Designed the interface, implemented a Python wrapper, and integrated new hardware components.

● C++ ● Python ● OpenCV ● System Design

Bachelor Thesis in Computer Vision (1.0) — Fraunhofer IPT

Feb. 2021 – Oct. 2021 ● 9 months

Created a library for data processing, model training, and evaluation, configurable by an AutoML system. Implemented various vision models, preprocessing techniques, and optimizations, utilized a pipeline architecture and YAML schema, and validated the library for semantic segmentation.
The library enabled extensive parameter variation and solved multiple use cases.

● Python ● Keras ● OpenCV ● System Design

Tutor Formal Systems, Automata and Processes Apr. 2020 – Sept. 2020 — RWTH Aachen

Projects

vinhill.github.io/TTTStats

Jul. 2021 – now

A web page visualising statistics about a computer game. Hosted on a Linux server with an Angular frontend and Node.js backend. Game logs are parsed to populate an SQL database.

● Node.js ● Express ● Angular ● MySQL ● Jest ● JavaScript