

NIKLAS PAUL

Email niklas.paul@murena.io
Phone +49 174 2664029
Address Ellerbachstrasse, 89335 Ichenhausen, Germany

Work Experience

Research Intern

12 weeks

2024

University of Toronto

As a participant of the Mitacs Globalink Research Internship Program, I had the chance to work under Prof. Jörg Liebeherr's supervision on a research project about LoRa mesh networks. On one hand, I was responsible for developing a cloud component which processes, stores and visualizes data uploaded by the mesh network. On the other hand, I implemented software for the ESP32 microcontroller which reads and transmits sensor data of various kinds. Working on cloud services and on hardware-oriented software during the same project was very educational for me.

Working student

10 months

2022-2023

BITE GmbH

Employed as a full-stack developer, I was assigned to develop a tool for injecting arbitrary HTML code into a remote website. During this project, I gained deep insights into web frameworks and the browser languages HTML, CSS and JavaScript.

Education

Bachelor's Degree in Computer Science

2021-2025

Ulm University of Applied Sciences

Projects

Reinforcement Learning in Material Flow Systems

8 weeks

2024

This full-time research project investigated the possibilities of integrating Reinforcement Learning methods into material flow systems, as they are found i.e. in production plants. Three other classmates and I implemented an event-discrete simulation environment using the Unity Engine and trained decentralized agents in simulated production systems to control the occupation of plants.

Royaltracer: A hyperrealistic Ray Tracer

4 months

2023-2024

For a semester project, I was part of a group of seven students who developed a 3D scene editor with an integrated path tracer. The rendering algorithm is written in OpenCL, the scene editor is web-based. As the chief architect (FDD), I was responsible for designing the scalable and component-based architecture of the software.

Awards

Scholar of the German Academic Scholarship Foundation	2024
Scholar of the Deutschlandstipendium	2021–2022

Languages

German	Native
English	C1
Russian	A1

Personal Interests

- Trumpet
- Basketball
- Sustainability
- History