LUCAS FORSTER

Software Developer

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FULL-STACK WEB DEVELOPMENT

I'm interested in collaborating on:

- **web applications** for external (customer-facing) and internal use
- backend implementations, especially **cloud**-based solutions
- **modelizing** processes and records in strongly typed languages
- performance oriented, native **cross-plattform** applications
- general **programming** tasks

PAST PROJECTS

Disaggregating Origin-Destination Matrices 📅 2021
Implementations for my Bachelor Thesis

Given millions of conducted trips, construct individual day plans resulting in equal traffic flow. The solution is based on graph search.

🔗 github.com/LucasForster/day-plans

`Rust` `Java` `Big Data` `Performance` `PostgreSQL`

Boardgame Artificial Intelligence 📅 2020
Programing Lab

Teams develop AIs that are continuously matched against another.

`Java` `Heuristics` `Performance` `Competitiveness`

Blockchain for Education 📅 2019
Fraunhofer FIT Cooperation Systems

Desktop client checking and displaying (sandboxing) file contents.

`TS` `JS` `React` `Electron` `SCSS` `Cross-Platform`

Microcontroller Operating System 📅 2019
Programming Lab

From electronic circuits to a light OS with scheduling and I/O.

`C` `Atmel Studio` `Low-Level`

Open Mobility Platform 📅 2018
Fraunhofer FIT Mobility Group

Front-end of a live-cooperation platform for specifying protocols.

🔗 github.com/FIT-Mobility/interaction-protocol-suite

`TS` `XSD / XML` `React` `Redux` `MUI` `CSS-in-JS`

TECHNOLOGIES

JS **TypeScript (JavaScript)**
Front- and Backend

Modern ECMAScript features (transpiled)

`Deno / Node` `i18next` `GraphQL`

React
Modularized JSX Front-End

Function components with hooks

`Sass / CSS` `Gatsby` `Electron`

Rust
Performant and Safe Implementation

Alternatively in `Java` or `C / C++`

LANGUAGES

German
First language

English
Day-to-day in work and leisure

French – DALF C1 (2014)
Grew up billingual

EDUCATION

Computer Science (B.Sc.)
RWTH Aachen University

📅 September 2021   📍 Aachen

Thesis title: "Disaggregating Origin-Destination Matrices using Time-Progressive Graphs for Agent-Based Traffic Simulations"

RWTH Aachen is one of Germany's "Universities of Excellence".

Abitur (High School Diploma)
Max-Planck-Gymnasium

📅 June 2015   📍 Saarlouis

Final exams: Mathematics, Computer Science, French, German, History

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