

# Burak Sen

+4915223856327 | Munich, Germany | [buraksen7@hotmail.com](mailto:buraksen7@hotmail.com) | [github.com/burakssen](https://github.com/burakssen) | [burakssen.com](https://burakssen.com)

## TECHNICAL SKILLS

- **Programming Languages:** Python, TypeScript, JavaScript, Zig
- **Web Technologies:** React.js, HTMX, Node.js, Express.js, Bun
- **Databases:** PostgreSQL, SQLite
- **AI & Machine Learning:** TensorFlow, PyTorch, ONNX, Jax
- **DevOps & Tools:** Postman, Docker, Git, Github Actions, Gitlab, Gitlab CI/CD

## EXPERIENCE

<b>TUM CommonRoad   Full Stack Developer</b> Django   React   HTMX   PostgreSQL   Minio   Gitlab CI/CD	Jul 2024 — Present <i>Munich, Germany</i>
<ul style="list-style-type: none"><li>• Designed and maintained a web framework serving <b>500+ active users</b> with <b>99% uptime</b>.</li><li>• Centralized application utilities by creating the <b>commonx</b> base package.</li><li>• Streamlined page creation workflows through efficient Markdown rendering.</li></ul>	
<b>Zant-Foundation   Volunteer Software Developer</b> Zig   ONNX	Apr 2025 — Present <i>Italy, (Remote)</i>
<ul style="list-style-type: none"><li>• Contributed to an open-source SDK for optimized Neural Network deployment on edge devices.</li><li>• Developed a <b>Zig-based backend</b> and implemented code generation from micro-instructions.</li><li>• Achieved a <b>30% reduction in memory usage</b> via static allocation planning for embedded systems.</li></ul>	
<b>TUM CIT   Assistant Student (Software Development)</b> React.js   Express.js   CouchDB   Docker   Redis   Nginx   Shibboleth SP	Dec 2022 — Oct 2023 <i>Munich, Germany</i>
<ul style="list-style-type: none"><li>• Architected and deployed a module creator application for the TUM School of CIT.</li><li>• Improved workflow efficiency by <b>10%</b> for over 100 faculty members.</li></ul>	
<b>Map E-Commerce &amp; Data Services Inc.   Software Developer</b> Node.js   C++   PHP   Go   MySQL   XML   EDI   JSON   VDA	Apr 2022 — Aug 2022 <i>Istanbul, Turkey</i>
<ul style="list-style-type: none"><li>• Engineered a high-throughput system processing <b>150 million EDI messages</b> annually.</li><li>• Improved data interoperability and reduced system processing time by <b>15%</b>.</li><li>• Maintained a <b>Go backend</b> to ensure scalability for hundreds of products.</li></ul>	
<b>IBM   Internship in Software Development</b> R   IBM BPM   ASPX   .NET   MS-SQL   Java   JavaScript	Jul 2021 — Jan 2022 <i>Istanbul, Turkey</i>
<ul style="list-style-type: none"><li>• Analyzed <b>10M+ row datasets</b> in R to optimize national-level HR policies.</li><li>• Enhanced a BPM platform for 50+ clients, maintaining <b>99.9% uptime</b> and adding bilingual support.</li><li>• Expanded automotive finance solutions and POS integrations using <b>ASP.NET</b> and <b>MS-SQL</b>.</li></ul>	

## PROJECTS

<b>JAXFluids Lab</b> React   Python   Jax   Onnx	Apr 2025 — Nov 2025 ( <a href="https://dbezgin.github.io/jaxfluids-lab">dbezgin.github.io/jaxfluids-lab</a> )
<ul style="list-style-type: none"><li>• Created a web platform integrating JAX-Fluids simulations with <b>ONNX models</b>.</li><li>• Implemented features for model selection, parameter tuning, and output visualization.</li><li>• Optimized frontend performance for improved scalability.</li></ul>	
<b>jax2onnx</b> Python   Jax   Onnx	Apr 2025 — Nov 2025 ( <a href="https://github.com/enpasos/jax2onnx">github.com/enpasos/jax2onnx</a> )
<ul style="list-style-type: none"><li>• Contributed to and open source tool to convert <b>JAX, Flax (NNX), and Equinox</b> models into ONNX format.</li><li>• Expanded tool capabilities by implementing support for various JAX primitives.</li></ul>	
<b>zff   Zig Flip Fluid Simulation</b> Zig   Raylib   WebAssembly	Jan 2024 — Mar 2024 ( <a href="https://burakssen.com/zff">burakssen.com/zff</a> )
<ul style="list-style-type: none"><li>• Developed a 2D fluid simulation in <b>Zig</b> and <b>Raylib</b> using the FLIP method.</li><li>• Leveraged <b>WebAssembly</b> to enable interactive, real-time browser execution.</li><li>• Improved engagement with mouse-input obstacle manipulation.</li></ul>	
<b>boids</b> C++   Raylib   WebAssembly	Jan 2024 — Feb 2024 ( <a href="https://burakssen.com/boids">burakssen.com/boids</a> )

- Simulated flocking behavior in C++ using WebAssembly for online access.
- Modeled realistic entity interactions based on separation, alignment, and cohesion rules.

## EDUCATION

---

**Technical University of Munich (TUM)**

Master of Science in Informatics

Munich, Germany

Oct 2022 — Present

**Istanbul Technical University (ITU)**

Bachelor of Science in Computer Engineering

Istanbul, Turkey

Sep 2017 — Jul 2022