

I'm Deniz, a Software Engineer from Portugal, currently pursuing a Master's degree in Computer Science in Denmark. I have a strong foundation in full-stack development, built through several projects spanning frontend, backend, and infrastructure. More recently, my interests have shifted toward lower-level and resource-constrained systems — edge computing, edge AI, and self-hosted infrastructure — areas where software meets hardware constraints.

EDUCATION

|                                                                                                            |                   |
|------------------------------------------------------------------------------------------------------------|-------------------|
| Master of Science in Computer Science and Engineering, <i>Technical University of Denmark</i>              | Expected Jul 2028 |
| Bachelor in Informatics and Computing Engineering, <i>Faculdade de Engenharia da Universidade do Porto</i> | Jul 2026          |
| Highschool Diploma, <i>Grande Colégio Universal</i>                                                        | Jun 2022          |

SKILLS

|                       |                                                                                                          |
|-----------------------|----------------------------------------------------------------------------------------------------------|
| Programming Languages | TypeScript, C++, Python, Java, Rust                                                                      |
| Frameworks & Tools    | React, Next.js, Tauri, MongoDB, PostgreSQL, Git, Docker, Clouflare, Vercel, Kafka, Nest.js, Hono, Elysia |
| Communication         | Portuguese (Native), English (Cambridge C1), Turkish (Spoken)                                            |

TECHNICAL EXPERIENCE

|                                                                             |                                               |
|-----------------------------------------------------------------------------|-----------------------------------------------|
| Curricular Internship / AI Based Compilation for CGRA's<br><i>INESC TEC</i> | Feb 2026 — Jul 2026<br><i>Porto, Portugal</i> |
|-----------------------------------------------------------------------------|-----------------------------------------------|

- Research position at **INESC TEC**, working on project AIMACOV.
- Developed a GNN-Guided partitioning algorithm combined with SAT solving, to map DFGs onto CGRAS.
- Reduced mapping times by  $\approx 50\%$ , compared to exhaustive search methods.
- Improved partitioning quality by  $\approx 33\%$ , compared to unguided approaches.
- Submitted a paper on the proposed methodology in INForum 2026 - **GNN-Guided Graph Partitioning for Spatial CGRA Mapping**.

|                                                                      |                                               |
|----------------------------------------------------------------------|-----------------------------------------------|
| Co-founder & Full-stack Software Engineer<br><i>Ocean Informatix</i> | Jan 2024 — Jan 2026<br><i>Porto, Portugal</i> |
|----------------------------------------------------------------------|-----------------------------------------------|

- Led end-to-end development of custom software and web solutions as the sole engineer, owning architecture, implementation, deployment, and maintenance.
- Collaborated directly with clients to understand business needs, translate them into technical requirements, and iterate quickly based on feedback.
- Designed and implemented solutions across multiple tech stacks, adapting to each client's preferred frameworks, environments, and constraints.

|                                                                                         |                                                                                                                                |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Alojamento Ideal<br><a href="https://alojamentoideal.pt">https://alojamentoideal.pt</a> | Jun 2025 — Sep 2025<br><a href="https://github.com/denizlg24/alojamentoideal">https://github.com/denizlg24/alojamentoideal</a> |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|

- Designed and implemented a full-stack web app for property and activity booking and travel management using **Next.js 15**.
- Implemented a dynamic booking system with real-time availability updates integrated with the **Hostify** property management system, **Hostkit.pt** for invoicing and border control and **Bokun** for activities.
- Integrated payments with **Stripe** for secure payments and reliability.
- Deployed on **Vercel**, and using **MongoDB** for data storage.

|                                                                |                                                                                                                                                    |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Shortn.at<br><a href="https://shortn.at">https://shortn.at</a> | Jun. 2023 — Feb. 2024 (V1) May 2025 — Jan 2026 (V2)<br><a href="https://github.com/denizlg24/shortn_v2">https://github.com/denizlg24/shortn_v2</a> |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|

- Shortn.at was my first full stack project. It started as a personal project but managed to retain some customers.
- As of Jan. 2026, I published V2 of Shortn and am now maintaining it and posting regular updates
- Version 2 was a complete rewrite of the project, due to a bigger volume of clients and new needs, and because there were now many new technologies
- Version 2 is built on **Next.js 16**, with the new **React Compiler**. The database selection was kept although I followed better principles thus increasing efficiency
- Version 2 had a full **CI/CD** pipeline with GitHub actions and is iterated using Agile Methodologies, with Sentry for error monitoring.

ACTIVITIES

|                                                                                                                                                                                                                                                                                                         |                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Handball Player<br>National U19 Handball Team Goalkeeper<br><i>Represented Portugal in the national team of U19 Handball, to a 6th place finish in the U19 World Championship.</i>                                                                                                                      | 2019 — 2024<br>Summer 2019 |
| American Football Player — Schwabisch Hall Unicorns<br><i>At 20 years old, and after changing to American Football, I embraced the challenge of living independently in Germany. I celebrated a significant achievement by winning the German American Football South Division as part of the team.</i> | Summer 2024                |