

HAIDER ALI

SOFTWARE ENGINEER · LINKÖPING, SWEDEN

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PROFILE

Computer engineering student at Linköping University working in **C and C++**, with a hands-on hardware background rather than a purely academic one: building and repairing computers as a hobby long before the first line of code, two years keeping a gym chain's equipment running across several sites, and an internship at ABB around switchgear and battery storage. Now moving deliberately down the stack into firmware and bare-metal work. I have also designed, shipped and supported a commercial product alone, so I know what finished actually costs.

TECHNICAL SKILLS

LANGUAGES	C · C++ · Python · Dart · SQL · JavaScript / TypeScript · C# · Bash
EMBEDDED & LOW-LEVEL	MIPS assembly · computer architecture · SIMD (SSE) vectorisation · cache-hierarchy latency measurement · memory-constrained design
SYSTEMS & NETWORKING	Linux (coursework and daily driver) · operating systems, processes, concurrency · POSIX C · toolchains and cross-compilation · reliable transport implemented in C · TCP/IP · Git
DATABASES & BACKEND	PostgreSQL (schema design, row-level security on every table) · Supabase (auth, edge functions) · SQLite · Firestore (denormalisation, query and cost modelling) · REST APIs · server-side receipt validation
MOBILE & WEB	Flutter · React Native (shipped to iOS and Android from one codebase) · Node.js / Express · .NET · Next.js · HTML / CSS
HARDWARE	Building, repairing and diagnosing computers (hobby, pre-dates the software) · equipment fault finding on the job · analog and digital fundamentals · LTspice · switchgear and battery storage (ABB)
SPOKEN & STATUS	Swedish (fluent) · English (fluent) · Arabic · Swedish citizen , open to säkerhetsprövning

EXPERIENCE

Quality & Safety Coordinator · Fitness24Seven

Aug 2024 – Sep 2026

Västerås, Sweden · equipment upkeep across several sites

- Owned daily fault reporting and preventive service for gym equipment across several locations, working from symptom to cause without schematics.
- Fixed in house what did not need an external technician, which kept machines in service and cut downtime.
- Self-trained in upholstery replacement and took that work off the service contract, removing **~20 000 SEK per year** in external maintenance cost.

Intern · ABB

Feb – Mar 2024

Sweden · power products

- Close exposure to **switchgear and battery energy storage systems**, seeing how industrial power hardware is specified, assembled and serviced in practice.

Fullstack Developer Intern · TrustYou

Jun 2026 – Present

Stockholm, Sweden (remote)

- Ship features in **React Native** to iOS and Android from a single codebase for a child-safety product used by families.
- Design **Firestore** schemas end to end: denormalisation, composite indexes and query patterns costed against real read and write volumes.
- Integrate an existing ML pipeline into user-facing features, and work to review and release cycles on a product with real users.

SELECTED PROJECTS

SYSTEMS AND LOW-LEVEL	
Ray tracer, written from scratch	C++ · OpenGL · GLSL
Recursive tracer with no framework underneath it, plus a real-time OpenGL renderer with my own GLSL shaders on the other side of the tradeoff. Vector maths, float precision and per-pixel cost made concrete.	
Compiler, built by hand	C / C++ · no generators
Lexer, parser, AST, type checker and evaluator, written without parser generators. The clearest look I have had at how source text becomes machine behaviour.	
SIMD and cache-latency benchmarks	C · SSE intrinsics
SSE-vectorised matrix kernels benchmarked against scalar versions, and cache latency measured level by level on real silicon rather than quoted from a slide.	

Reliable transport protocol

C · sockets

Reliable transport over an unreliable channel: framing, sequence numbers, retransmission and connection teardown, tested under induced packet loss.

PRODUCT ENGINEERING

Deltalift · commercial fitness app, sole engineer

2025 – Present

Flutter · Dart · SQLite · PostgreSQL · Supabase · App Store + Google Play

- Designed, built and launched the whole product alone: **36 screens**, 300+ exercises and illustrations, now **450+ users** across both stores, still maintained and supported by me.
- Offline first**. Full local SQLite store so every session works with no signal, then syncs across a user’s devices when the connection returns.
- PostgreSQL with row-level security on every table**, plus Supabase auth (email, magic link, Google, Apple) and edge functions.
- Server-verified in-app purchases** for the paid tier, because receipt validation on the client is not validation.
- Built an analytics engine that benchmarks a lifter against elite standards, forecasts progress up to four months out, and visualises muscle recovery. Statistics, and I call it statistics.

EDUCATION

Civilingenjör i datateknik · M.Sc.Eng. Computer Engineering (300 hp) · Linköping University

Aug 2026 – Jun 2029

B.Sc. studies, Computer Science · Mälardalen University (transferred to LiU)

Aug 2024 – Jun 2026

LIU, IN PROGRESS

Data Structures, Algorithms & Programming Paradigms (11 hp, C++) · Programming in Python I & II · Software Development Methodology · Computer & Software Engineering Work · Engineering Professionalism I & III · Introductory Mathematical Analysis · Mechanics

MDU, COMPLETED (144 HP)

Computer Architecture · Operating Systems · Data Structures, Algorithms & Program Construction in C · Linux · Data Communication · Electronics · Compiler Theory · Computer Graphics · Databases · Object-Oriented Programming · Mobile Application Development · Web Application Development · Multivariable Calculus · Vector Algebra · Discrete Mathematics · Probability & Statistical Theory · Cybersecurity Fundamentals