Fayçal Beghalia

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PROFILE

4th-year software engineering student with experience in full-stack development (TypeScript, React, NestJS) and strong foundations in systems programming (C/C++, Rust), SQL, and backend engineering. Previously shipped production features and improved CI/CD pipelines during internships, with a focus on code quality and reliability. Motivated to work as a teaching assistant to help student learn and grow their programming skills. I've been teaching programming since 4 years now to students and friends enabling them to be more confident in their programming skills.

EDUCATION

École pour l'Informatique et les Techniques Avancées (EPITA)   Kremlin-Bicêtre, FR
Computer Science Engineering Degree   *Sept. 2022 — June. 2027*
- France's second-ranked engineering school
- Joined the English track.
- Specialized in GITM (Global IT & Management).

Lycée Saint-Pierre Fourier   Paris, FR
Baccalauréat   *Sept. 2019 — June. 2022*
- French Baccalauréat with honors (high distinction), specialized in Computer Science, Mathematics, and Chemistry.

PROFESSIONAL EXPERIENCE

Software Engineer Intern   Aug. 2025 — Jan. 2026
Polycea   *Paris, FR*

Worked on Indigo's large-scale international tele-operation platform serving 600+ parking facilities across Europe.
- Developed full-stack features using NestJS, TypeScript, PostgreSQL, TypeORM, React, and a monorepo architecture.
- Improved GitLab CI/CD pipeline performance by 40% through modernization, caching optimization, and pipeline restructuring.
- Dockerized services and contributed to internal documentation for deployment and development workflows.
- Created developer tooling: wrote documentation for k6 Studio and built an automated pipeline enabling faster, standardized load-test creation.
- Contributed across backend, frontend, CI/CD, and internal tooling as part of a team of 5 developers and 4 PMs.
- Proposed and implemented modern technologies adopted by the team, improving development efficiency and reliability.

Software Engineer / Developer   June. 2022 — Current
Freelance   *Paris, FR*
- Built a production website for a company using PHP, SQL, CSS, JavaScript, and PostgreSQL.
- Developed a multiplayer competitive game in Unity (C#) including matchmaking, networking, and game logic.
- Delivered custom software solutions for clients, including automation scripts, UI components, and lightweight web tools.

Sales Assistant   Nov. 2025 — Current
UNIQLO Opéra   *Paris, FR*
- Recognized directly by the General Europe Stores Manager for outstanding customer service metrics.
- Managed stock operations, visual merchandising, and contributed to improving the in-store experience.
- Increased customer engagement by encouraging app installations and user feedback.

TECHNICAL PROJECTS

Sudoku OCR System in C :
- Built a complete OCR pipeline entirely in C: grayscale filters, binarization, cell extraction.
- Designed and trained a custom neural network for digit recognition.
- Implemented a graphical UI to interact with the solver and recognition engine.
- Demonstrated strong low-level, algorithmic, and ML fundamentals.

Rust RDBMS (Database Engine) :

- Developed an RDBMS in Rust from scratch (storage engine, SQL-like queries, indexing logic).
- Demonstrated strong understanding of RDBMS internals, memory management, and Rust safety principles.

TIGER Compiler:
- Implemented a compiler for the TIGER programming language, including lexer, parser, AST generation, semantic analysis, and IR translation.
- Gained hands-on experience with compiler design, memory layout, recursive descent parsing, and code generation.

Skills

Software Engineering :

- Full-stack (TypeScript, React, NestJS)
- Backend APIs, microservices exposure
- Systems programming (C, C++, Rust)
- Database design, PostgreSQL, SQL

Tools & DevOps :

- Git, GitLab CI/CD
- Docker, monorepos
- Load testing with k6
- Linux, shell scripting

Product & Leadership :

- Cross-functional communication
- Documentation & technical writing
- User experience awareness
- Team collaboration & project ownership

Interests

- Product design, UX, marketplaces
- Fashion and visual aesthetics
- Teaching
- Team sports (tennis, baseball)
- Travel and multicultural environments

Languages

- French (native)
- English (TOEIC : 945/990, C1)