John Decorte

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Education

42 Belgium – Master in Information Technology (RNCP Level 7) Mar 2026
- Ranked among the top 3 most advanced students out of a cohort of over 800.
- Selected as a tutor for the 'piscine', the highly competitive month-long selection process, where I mentored and assessed candidates, helping them develop problem-solving skills and adapt to 42's peer-learning methodology

Louvain School of Engineering – Bachelor of Science in Computer Science Sep 2025
- Minor in Entrepreneurial Spirit, with coursework focused on startup creation, product strategy, and business development.

Skills

Languages: C#, C/C++, Python, TypeScript, SQL, x86-64 Assembly
Technologies: Git, Linux, Docker, Kubernetes, React, Flutter, Bash, AWS (EC2), Ansible, Argo CD, PostgreSQL
Certifications: AWS Certified Cloud Practitioner, AWS Certified Solutions Architect – Associate

Experience

Backend Software Engineer Intern, Wilink – Louvain-la-Neuve, Belgium Mar 2025 – Sep 2025
- Contributed to internal tooling and data integration systems for a Belgian insurance and financial services brokerage working with 20+ insurance partners
- Built and deployed a full-stack monitoring platform using C#, React, Next.js, Tailwind CSS, Python, and MongoDB to process 100k+ logs per month with real-time alerting
- Developed secure backend services and REST APIs in C# for partner data integrations using OAuth2/OpenID Connect authentication flows
- Improved platform performance through MongoDB indexing and query optimization, reducing query response times by 35%
- Implemented authentication and authorization logic in C# to protect sensitive broker and client data across internal services

Projects

Tetris on a Custom Kernel Rust, x86 Assembly
- Created a bootable kernel in Rust using GRUB, implementing essential functionalities such as ASM boot code, screen interfacing, memory management, and basic I/O operations
- Implemented a Tetris game as an engaging demonstration of the kernel's capabilities

8-Bit Computer Architecture and Assembly Language Logic Gates, Assembly
- Architected an 8-bit computer from scratch using NAND gates, programmable with a custom assembly language
- Implemented function calls via a stack, enabling easier development of complex algorithms like Tower of Hanoi
- Ranked 300 out of 85,000 on the Turing Complete leaderboard

HTTP Web Server C++, HTTP Protocol, Non-Blocking I/O
- Developed an HTTP server in C++ capable of handling GET, POST, and DELETE methods with support for cookies, CGI, file uploads/downloads, and static content delivery
- Implemented non-blocking I/O operations to support simultaneous reading and writing with multiple client connected
- Host this resume at mywebsite.fr

Ray-Casting Video Game C, Ray-Casting, Dynamic Memory Allocation

- Designed a 3D maze rendering engine with Ray-Casting, incorporating user controls, animated sprites, health kits, interactive doors, and a mini-map for an immersive experience
- No game engine was used