Dries Vanspauwen

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EDUCATION

KU Leuven   Leuven, Belgium

B.Sc. in Engineering Science; **Cum laude**   Sep 2020 − Jul 2023

M.Sc. in Computer Science - Secure Software; **(Exp. Magna cum laude)**   Sep 2023 − (Exp. Jul 2025)

> **Master Thesis:** Reverse Engineering of Microarchitectural Weird Machines - focusing on transient execution vulnerabilities and cache timing attacks

Instituto Superior Técnico Lisboa   Lisbon, Portugal

Erasmus+ Exchange;   Sep 2023 − Feb 2024

EXPERIENCE

IT Volunteer | Vlaamse Technische Kring (VTK) | Leuven, Belgium   Jul 2022 − Jul 2024

- Official student organization of the Faculty of Engineering Science at KU Leuven (± 2400 members)
- Automated internal operations by improving IT infrastructure (`github.com/LitusProject/Litus`) using PHP, Twig and Doctrine
- Configured and deployed web applications (WordPress, Next.js, PHP) on self-hosted servers using Apache
- Actively involved in current and future affairs of VTK as a member of the administrative body

Backend Development Intern | Green Island | Grimbergen, Belgium   Jul 2023 − Aug 2023

- Designed promotional jackpot feature for iGaming platform from scratch, improving player engagement
- Developed mathematical models based on data analysis of existing jackpot systems using Python
- Implemented backend solutions in C#, utilising batch processing and caching mechanisms
- Gained hands-on experience with distributed systems, including event sourcing and message queues
- Developed REST API endpoints using ASP.NET, OpenAPI schemas and NHibernate ORM

Software Development Intern | Keysight Technologies | Rotselaar, Belgium   Jul 2022 − Aug 2022

- Designed plugins with Qt and Python, increasing engineering productivity by 7.5% through automation of common tasks

PAL Tutor (Peer Assisted Learning) | Vlaamse Technische Kring (VTK) | Leuven, Belgium   Sep 2021 − Jan 2022

- Assisted freshmen with the course 'Applied Mechanics I'

AWARDS & ACHIEVEMENTS

Case Competition Winner: Awarded with Best Technical Solution of the Engineering Case Competition presented by AB InBev, Easi, KPMG, Microsoft and Twipe and organised by VTK and Industria. (Nov 2024)

Best Belgian MEP Delegate: Selected as best of 20 participants at the Netherlands MEP Conference, a five-day simulation of the European Parliament where students tackle political issues through research and debate (May 2019)

International MEP delegate: Selected to join international version of MEP in Valletta, Malta. (Nov 2019)

PROJECTS

Burgieclan (WIP) | `github.com/VTKLeuven/burgieclan`

- Group of students creating a file & information sharing platform for engineering students
- Set up NextJS architecture (error handling flow, API service layer, caching mechanisms) and automated deployment via Github Actions
- Designed UI components using Typescript and Tailwind CSS
- Implemented OAuth 2.0 flow from scratch using custom authorization server and JWTs
- Contributed to Symfony backend, created API endpoints using API Platform

Static NextJS Website | `github.com/driesvanspauwen/nuffalo-jill` | `https://nuffalojill.vtk.be/`

- Team leader of 6 people creating static NextJS website for student organization

Network & Computer Security Project

- University project of simplistic bank infrastructure, focused on securely transporting and storing data
- Established data encryption (using AES), integrity (using MAC), freshness (using Nonces) and secure communication using TLS
- Implemented communication channels via **Python** sockets and security measures via **Java** crypto library

VR Driving School | github.com/MetaverseRaccoons

- University project of 9 students creating virtual reality driving school simulation at Raccoons, Leuven
- Implemented VR UI in Unity and synchronised with backend server via Unity Scripting API in C#

SKILLS

Programming: C#, PHP, Typescript, Python, HTML/CSS/Tailwind CSS

Frameworks & Libraries: Symfony, Next.js, React.js, ASP.NET, Django, NHibernate, Doctrine

Tools: Git, Jira, Docker, Ubuntu Server, Apache, LaTeX, Visual Paradigm

Speaking Languages: Dutch *(Mother tongue)*, English *(C2)*