

June Vanlerberghe

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EDUCATION

Duke University

Expected Grad: May 2026

M.S. Electrical & Computer Engineering

- Concentration in quantum software. Courses: Quantum Engineering, Computer Systems, Data Structures/Algorithms
- Quantum Computing Topics: Quantum Algorithms, Error Correction, Hardware Platforms and Architectures.

University of Illinois at Urbana-Champaign

Grad: May 2023

Bachelor of Science in Engineering Physics

GPA: 3.68

- Graduated with Honors
- Concentration in computational physics. Minors in computer science and linguistics.
- Special interest in Quantum Computing (Qiskit, Quirk, QC Simulator, Quantum Optimization, Phase Estimation)

WORK EXPERIENCE

Java Developer

September 2023 – June 2024

IBM

Antwerp, Belgium

- Developed, optimized and automated tools for Belgium's largest Energy and Utility providers.
- Enhanced and thoroughly tested our confidential systems.
- Optimized a regional data analysis tool, leading to a 288x speedup.
- Automated a data processing pipeline that reduced the team's daily workload by 10%.

Cyber Security Intern

May 2022 – May 2023

Lawrence Livermore National Laboratory

Livermore, CA

- Evaluated software in the energy sector to ensure the integrity of critical system components (<https://cytrics.inl.gov/>).
- Reverse engineered binaries to find vulnerabilities using **Ghidra** and **QEMU**.
- Identified 4 critical vulnerabilities. Prepared a comprehensive report summarizing these vulnerabilities, including potential risks and mitigation strategies. Presented findings to customer and other National Laboratories.
- Developed tool to speed up manual firmware analysis using OOP in **Python**.

App Developer

Oct 2021 – June 2022

Micro and Nanotechnology Laboratory at UIUC

Champaign, IL

- Developed a web application to teach engineering topics to young students with limited access to STEM education.
- Worked with a small development team to create a **JavaScript** web app to demonstrate PID control.
- Game can be found at: <https://junevanlerberghe.github.io/CISTEME365/>

RESEARCH

Research Assistant

Sep 2020 – June 2021

Secure and Transparent Systems Laboratory at UIUC

Champaign, IL

- Identified if a skill squatting attack on Alexa is possible and mitigating the risk of malicious activity.
- Developed web scrapers to scrape over 100,000 Alexa skills and queried a homonym generator for each skill name.
- Used **SQL** to format information in a database.
- Implemented an end-to-end pipeline on Google Cloud to generate mp3 files to query Amazon Alexa.

ACTIVITIES

Project Manager

Dec 2020 – May 2022

i-MADE Student Club (Illinois Medical Advancements through Design and Engineering)

Champaign, IL

- Student engineers work to create healthcare solutions for the local community at no expense to clients.
- Developed a mobile application using **Flutter** for the Health Maker Lab to advertise events and provide information.
- Conducted research for a startup to develop ML algorithms based on ECG data.

SKILLS

Languages: English (native), Dutch (native), French (beginner)

Programming: Java (experienced), Python (experienced), Qiskit (experienced), C/C++ (experienced), SQL (skilled), R (skilled), Flutter (skilled), HTML5/ CSS (skilled), JavaScript (skilled), MongoDB/Neo4j (basic), MATLAB (basic)