Hayley Treutens

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Detail-oriented Computer Science student with a strong foundation in software engineering and applied machine learning. Proven ability to build full-stack applications, develop real-time AI tools, and apply data-driven solutions to real-world challenges. Passionate about turning code into impactful experiences through scalable and user-focused systems.

EDUCATION

Belgium Campus ITVersity | Pretoria, South Africa
       B.S. in Computer Science, (in progress)   *2023 – Expected 2026 (3 years theory + 1-year internship)*
Focus: Software Engineering, ML/AI, Full Stack Development

TECHNICAL SKILLS

Programming Languages: C#, Python, JavaScript, HTML, CSS, Java
Frameworks & Tools: .NET, Node.js, TensorFlow, Scikit-learn, Pandas, Dash, Git, GitHub, Azure, Unity, Visual Studio, Jupyter, Hugging Face

CERTIFICATES

Jan 2025 – Present

- Introduction to Generative AI (AWS)
- AI and ML Fundamentals (O'Reilly)
- Agentic Automation (Belgium Campus ITVersity)
- GenAI Essentials for Everyone (O'Reilly)
- AI Agents (O'Reilly)
- AI and ML Tools for Deep Learning (O'Reilly)

PROJECTS (For more projects visit:

AI-Driven Drone Control & Mixed Reality Interface - *Python, Unity, Azure, MRTK*   *Jan 2025 – Present*
- Engineered a modular NLP-powered voice control system for drones using Azure Cognitive Services.
- Built a real-time mixed reality interface in Unity for drone telemetry and feedback.
- Delivered a scalable prototype for hands-free drone control in hazardous environments.

Appointment Booking System - Java, Swing, JavaDB, Git (GitHub)   *July 2025*
- Implemented MVC architecture for scalable Java application structure.
- Designed intuitive GUI using Swing with data validation and error handling.
- Enabled persistent data storage and full CRUD operations via embedded JavaDB.

Sentiment Analysis Web Dashboard - Python, NLP, Scikit-learn, ML Models (GitHub)   *Apr 2025*
- Deployed a web app analysing 50K+ IMDb reviews using machine learning classifiers.
- Enabled real-time text-based sentiment analysis for media insights.
- Achieved over 85% model accuracy through preprocessing and model tuning.

Grade Prediction Tool - Python, Scikit-learn, Dash, ML Models (GitHub)   *Apr 2025*
- Processed educational datasets with normalization and feature engineering techniques.
- Built and evaluated supervised learning models using TensorFlow.
- Developed a Flask-based web interface for real-time prediction of student results.

Student Enrollment System – JavaScript, Node.js, Express.js, MySQL, HTML, CSS, Git (GitHub)   *Nov 2024*
- Designed RESTful API backend using Express.js and integrated MySQL database.
- Developed dynamic front-end forms with validation for real-time enrolment updates.
- Ensured responsive UI across devices and implemented server-side form handling.

LEADERSHIP

Student Tutor – Mathematics & Linear Programming   (Belgium Campus ITVersity*)*   *Jan 2025 – Present*
- Provided 1:1 and group tutoring to support peers in quantitative subjects.
- Contributed to improved academic performance and course pass rates.

Founder & President | University Club   (Belgium Campus ITVersity*)*   *Jan 2024 – Dec 2024*
- Founded and led a 30+ member community celebrating anime and Japanese culture.
- Organized events and built a space for inclusive student engagement.