



ERIN DAVID CULLEN

SOFTWARE ENGINEER |
DATABASE DEVELOPER

ABOUT ME

I thrive on learning and applying knowledge to build solutions that deliver value. I have a natural and unwavering drive for continuous improvement. With an understanding and involvement in mechanical and software engineering, as well as business, I can bring a blend of technical and operational insight. In 2022, I began working on a toolset focused on improving both people and systems, in the tool hire industry. I applied some of the knowledge and experience I had in business operations, logistics and systems design. I'm currently studying BComputing with a focus on data science and databases, and I'm eager to learn and apply my skills in a professional environment.

Earlier in my academic career, I spent four years studying mechanical engineering before deciding to transition into software and system design. Making that switch wasn't easy, but it was the right move, one that allowed me to pursue a path more aligned with how I think and what I love to build.

EDUCATION

National Senior Certificate

St. Albans College (IEB) 2017

Bachelor of Engineering (Mechanical)

University of Pretoria 2018 - 2021
Completed 3 years

Bachelor of Computing (Data Science)

Belgium Campus 2023 - 2025
Current Average 77% over 3 years
In 2026 we work in internships as part of the honours degree

PERSONAL QUALITIES

- Accurate & Precise
- Detail-Oriented
- Ethical
- Efficient & Effective
- Hard-Working
- Responsible
- Analytically Minded
- Self-Motivated
- Independent
- Curious & Always Learning
- Ambitious
- Simple & Clear

HOBBIES

- Carpentry (Woodworking)
- Hiking
- Photography

CERTIFICATES

- Mensa PTA Member 2024
- Dale Carnegie Generation.Next 2016
- University of Pretoria Most Innovative Project (EBIT Faculty) 2019
- Zeiss Geometric Dimensioning & Tolerancing 2021

CAREER OBJECTIVE

- My objective is to gain hands-on experience through a 2026 Honours internship, and to continue developing as a software engineer. I aim to make a positive impact and add value as I grow.

WORK EXPERIENCE

Coastal Hire Centurion

Operations & Systems
Assistant (Part-Time)

2021 - 2023

- Was involved on an ad-hoc and part time basis at a Coastal Hire (Plant and Tool Hire) in Centurion. Got to observe and know various aspects of daily operations and management (including busy and high pressure hire desk operations). Assisted in workshop with technical and mechanical functions. Busy building 2 custom inventory and CRM tools to support sales reps and stock tracking (still work in progress). Also assisted with some technical aspects during the requirements analysis for Kerridge ERP systems that was to be implemented.

Independent Software Developer

Full Stack Developer

2022 - present

- Developing a comprehensive diary system tailored for the hire industry. Collaborating with business owners and software engineers to gather domain insights and continuously refine the solution. Responsible for database architecture (PostgreSQL), backend development (Python/Flask), and frontend implementation (Next.js).

PROJECTS

- AetherFlow ERP System (for a hire company)
 - Diary
 - Logistics
 - Driver Scheduling
 - Employee Task Management
 - Inventory
 - AI agent (automation)
- AI Chat System
 - Locally run
 - Highly adaptable
 - Modular
 - Designed to be integrated into systems

REFERENCES

Available on Request

TECHNICAL SKILLS

- Python (Backend, APIs, Automation)
- JavaScript / TypeScript
- Node.js
- Flask (Python)
- Next.js (React)
- SQL (PostgreSQL, SQLServer)
- MongoDB
- Docker & Docker Compose
- Bash (WSL, Linux CLI)
- Python API Testing

SOFTWARE

- Git & GitHub
- VS Code
- Postman (API Testing)
- N8N (Node Based Workflow automation)
- Ollama (AI Integration)

SYSTEM ARCHITECTURE & DEVOPS

- REST API Design
- Microservices Architecture
- Containerization (Docker)
- Linux Server Management (Ubuntu + WSL)
- Virtual Environments & Dependency Isolation (venv, pipenv, Docker)

AI & AUTOMATION

- Whisper (Speech-to-Text)
- Zero-Shot Classification (NLP)
- OpenAI API Integration
- Ollama with PostgreSQL memory
- Autonomous Agent Design (Planned)

RESOURCES

- Website
 - <https://beardedseal77.github.io/CV/>
- LinkedIn
 - <https://www.linkedin.com/in/de-cullen/>
- GitHub
 - <https://github.com/BeardedSeal77>