

# Tjay Burger

## Junior Software Developer

Potchefstroom, North West (relocating to the Western Cape) · [tjayburger2004@gmail.com](mailto:tjayburger2004@gmail.com) · +27 71 439 0187 · Driver's licence and own car

[LinkedIn](#) · [GitHub](#)

I build software around data: FastAPI backends, React dashboards and services that run unattended on a server. Computer Science and Statistics student at North-West University, group leader on every team project, and third at the South African wrestling championships. Looking for junior developer roles in Stellenbosch, Cape Town or remote.

## PROJECTS

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**Credit Scorecard Engine** · Python, FastAPI, React · [live demo](#) · [GitHub](#)

- Full-stack credit scoring app: a FastAPI backend with endpoints for training, scoring, model statistics, WOE tables and gap analysis, and a React, Vite, Tailwind and Recharts dashboard with four pages.
- Models trained on 307,511 real applications (Home Credit Default Risk) with WOE binning and points scaling written from scratch. Holdout AUC 0.737 (bureau) and 0.631 (non-bureau).
- Frontend on Vercel and backend on Render, with the pre-trained model committed so the demo runs without the dataset.

**AI Options Trading Agent** (hackathon, paper trading) · Python, alpaca-py, DigitalOcean · [GitHub](#)

- Python service in five stages (data, signal, LLM decision, risk gate, execution) that places multi-leg option orders through the Alpaca API.
- An independent risk module re-checks live bid/ask and position size before any order. Every attempt, including rejections, is logged to CSV and shown in a Streamlit dashboard.
- Runs unattended on a DigitalOcean server under systemd with a market-hours scheduler (15-minute loop, restart on failure) and test scripts for the signal and decision logic.

**Causal Credit Uplift** · Python, EconML · [live dashboard](#)

- Python data science project published as a live dashboard on Vercel. It compares T-learner and CausalForestDML on a real email RCT and on synthetic credit data, where the best model recovered known treatment effects with 0.927 correlation.

## EDUCATION

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**BSc Computer Science and Statistics**, North-West University, Potchefstroom · final exam 16 November 2026

- STTN327 group project (five people, statistics): predicted sulphur dioxide levels across 41 US cities. Group leader; built the mixed-effects and random forest models and presented the model comparison.
- CMPG321 group research project: wrote the SQL behind a ride-hailing study of trip cancellations, safety metrics and fleet quality.

## EXPERIENCE AND LEADERSHIP

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- **Payroll spreadsheets, family firm:** build the monthly UIF and admin payroll workbooks in Excel from the monthly payroll files.
- **Class representative:** for first-year modules and again for a module this year.
- **Group leader:** led the team on university projects, including the five-person STTN327 project.
- **Charity events:** take part in charity runs, including the Hollard Balls Run for cancer.

## SKILLS

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- **Languages:** Python, TypeScript, SQL, R, SAS
- **Backend and data:** FastAPI, pandas, NumPy, scikit-learn, XGBoost, Streamlit
- **Frontend:** React, Vite, Tailwind CSS, Recharts, Next.js
- **Deployment:** Git, Vercel, Render, DigitalOcean with systemd; Cursor and Claude for AI-assisted development
- **Next to learn:** cloud platforms, Java, C++

## BEYOND THE CODE

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Third place at the South African wrestling championships (Olympic-style wrestling). Played rugby, train daily, and am preparing for a Hyrox race. Three Kaggle competitions entered.