

Cameron Hendry

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EDUCATION

Whitman College

Bachelor of Arts in Computer Science; Minor in Data Science

Walla Walla, WA

Aug. 2023 – May 2027 (expected)

- **GPA:** 3.92
- **Selected Coursework:** Machine Learning, Data Structures, Algorithms, Linear Algebra, Computer Systems, Discrete Mathematics, Statistics

EXPERIENCE

Software Design & Data Science Intern

Jun. 2025 – Aug. 2025

Williams Investments

Bothell, WA

- **Email Service Automation:** Built an email service that pulls applicant-agent assignments from *Quick Lease Pro*, personalizes messages with the agent's **name, phone, and email**, and sends from the company account, eliminating manual lookups and copy-pasting.
- **Impact:** Automated delivery of approximately **20** applicant emails per day, reducing corporate office phone time by **about 1 hour per day**.
- Engineered webhook-based delivery with **rate limiting**, **retries with exponential backoff**, and structured **JSON logs** for auditability.
- Separated **config from code** (templated subjects/bodies; environment-based secrets) and supported both on-demand runs and scheduled jobs (*GitHub Actions*).
- **Data Tools & Integrations:** Developed reusable Python modules to ingest internal endpoints, validate CSV exports, and normalize contact records; used *Pandas/NumPy* pipelines and *Selenium* for authenticated pages.
- **Lease Duration Modeling:** Built a supervised pipeline to estimate **lease duration** from *approved-tenant* data; implemented cleaning and train/validation splits; evaluated *LinearRegression*, *RandomForestRegressor*, and *XGBRegressor* via cross-validated **MAE/R²** and selected the best model on a holdout set.

PROJECTS

Automated AI Instagram Poster | Python, Instagram Graph API, OpenAI API, GitHub Actions

2025

- Built an end-to-end automation that **generates an image and caption** and posts via the Instagram Graph API; uses GPT-5 for prompt diversification with safe fallbacks (*gpt-4o-mini* and static templates) to ensure consistent posting.
- Hardened error handling with **retries/backoff** across API calls and media uploads; added graceful fallbacks for temporary media hosting during debugging.
- Implemented image preprocessing with *Pillow*: resilient decoding of partial images and **1080×1080** output to avoid borders or cropping.
- Scheduled posting via *GitHub Actions*; managed secrets for tokens; ensured idempotent runs with concise, informative logs.

Flappy Bird AI | Python, Pygame, NumPy

2024

- Implemented a genetic algorithm that evolves a lightweight NumPy neural network to play Flappy Bird; supports both **visual demo** and **headless fast training** modes.
- Refined gameplay: bird tilts up to 22.5° on jump with smooth decay; randomized pipe heights and gaps to reduce pattern overfitting.
- Improved collisions by shortening top-pipe hitboxes and adjusting rectangle widths (`get_rects` width offset -20).
- Added a **persistent high score** (saved to disk), centered in-game score, and tuned “You Died” UI placement for readability.
- Modularized *Bird* and *Pipe* classes to enable quick tweaks to physics, gap sizes, and training parameters independent of rendering.

TECHNICAL SKILLS

Languages: Python, Java

Libraries: Pandas, NumPy, scikit-learn, XGBoost, Matplotlib, Pillow, Pygame, Requests

Developer Tools: Git, GitHub Actions, Selenium, Jupyter

Platforms/APIs: Instagram Graph API, OpenAI API, Quick Lease Pro