

Peter Johnstone

Experience

- Sep 2025 – Present **Lead ICPC Rep & Coding Seminar Organizer**, *Bucknell University*, Lewisburg, PA
- Appointed by faculty to lead Bucknell's ICPC programming team.
 - Currently organize and run weekly competitive coding/LeetCode seminars for peers.
- Aug – Dec 2024 **Co-Founder & CTO**, *Eigofy, Inc.*, Lewisburg, PA (On-site)
- Led development of a Chrome extension for instant English–Japanese lookups with spaced-repetition vocab tracking; authored >90% of the JavaScript codebase.
 - Acquired 100+ early adopters within the first month, validating product demand; secured grant funding and presented at TechCrunch Disrupt SF.
 - Deployed backend infrastructure (Google Cloud, Firebase, Stripe) and integrated AI APIs with prompt engineering for context-aware definitions. [Website]
- Jun – Aug 2024 **Software Engineer Intern**, *Visual Alpha*, Tokyo, Japan (On-site)
- Built a fullstack internal data-update tool with a Python/Flet frontend, SQL backend, and company API integration; adopted for daily use and reducing manual engineering effort.
 - Contributed 3,000+ lines across 45 GitHub PRs with reviews and documentation.
- Jun – Aug 2023 **Software Tester Intern**, *Habitto*, Tokyo, Japan (On-site)
- Improved login reliability and regression coverage for a mobile investing app beta by writing and executing automated tests (Appium/Android Studio).
 - Collaborated in a Scrum team with biweekly sprints; managed issues and tracked team velocity in Jira.

Selected Projects

- Jul – Sep 2025 **Magnus Carblunder (Rust Chess Engine)**, *Open-source*
- Implemented a chess engine (*10,000+ LOC in Rust*) with advanced search (negamax, alpha–beta, iterative deepening).
 - Optimized with pruning and heuristics, achieving ~2800 Elo strength in self-play (on par with top grandmasters). [GitHub]
- May – Jul 2025 **OCR Neural Network in Pure Python**, *Open-source*
- Built a character recognition model **from scratch without NumPy**, implementing matrix ops, ReLU + softmax layers, and SGD training loop.
 - Delivered an end-to-end pipeline with evaluation metrics and interactive quiz mode for human-vs-AI testing. [GitHub]

Education

- Aug 2022 – May 2026 **Bachelor of Engineering, Computer Science & Engineering**, *Bucknell University*, Lewisburg, PA
- (expected) Second Major in Japanese; Activities: Japan Society, Climbing Club, Chess Club, Coding
- Selected Coursework:** Data Structures & Algorithms, Operating Systems, Software Design, Team-Based Development, Discrete Structures, Calc-Based Physics & Statistics
- Study Abroad: Nanzan University (Spring 2025)

Technical Skills

- Languages Rust, Python, C++, SQL, C#, Java, JavaScript, Dart, HTML/CSS
- Tools Git, Vue, Flet, Jira, Firebase, Stripe, Appium, Flutter, Android Studio
- Topics Algorithms, Data Structures, Search & Evaluation, Performance Optimization, Testing/CI, GUIs, Prompt Engineering, AI API Integration

Languages

- English Native
- Japanese Fluent; JLPT N1 (Dec 2023)
- German Fluent, Heritage speaker