

Pawel Sloboda

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Software Engineer with 4+ years of Python experience spanning **data analysis, backend systems, and machine learning**, including production ML pipelines and RAG applications. Skilled in **JavaScript, React, Next.js, and modern frontend frameworks** with 4+ years of full-stack web development. Experienced in **Azure (4 years) and AWS (2 years)** ecosystems, deploying scalable cloud and containerized solutions. Adept at **agentic coding workflows** using tools like Claude Code and Cursor, applying **Agile methodologies** to rapidly prototype, iterate, and deliver production-ready software.

WORK EXPERIENCE

Social Impact Enterprise (Sie2.com)

05/2025 - 08/2025

Full-Stack Software Engineer • Contractor

Washington, DC

- **Built** an AI-driven health-access platform mining 3k+ DMV providers (50k+ services), powering CareFind used by 2 shelters & 30+ caseworkers.
- **Deployed** Cosmos DB vCore + Azure OpenAI embeddings for sub-second semantic search, cutting RU costs 38%.
- **Designed** a TypeScript + Python agent framework where LLMs extract insurance/SSN/free-service data with 92% F1, auto-refreshed nightly.
- **Refactored** Next.js 15 / React 19 front end with shadcn/ui + Tailwind, boosting ally from 71 → 98 and FCP to 1.2s.
- **Launched** programmatic SEO engine with 3.5k+ indexed pages, driving 100k+ Google impressions in 3 weeks.

National Defense University (DoD)

03/2025 - 06/2025

Software Engineer • Contractor

Washington, DC

- **Started contract with 3 months left and Led** Windows 7 → 11 migration across 80 laptops for cyber warfare simulations, with Windows & Ubuntu VM environments.
- **Automated** cybersecurity toolchain setup (Kali, Metasploit, Wireshark, John the Ripper) with .bat scripts.
- **Built** a local RAG bot (Python, LangChain, Llama, vector DB) integrated with SharePoint for instant document access.
- **Engineered** Selenium + BeautifulSoup4 bot with OpenAI to cross-reference 17k graduates, extracting 10k structured alumni profiles.

Adobe

05/2023 - 08/2024

Machine Learning Engineer • Internship

- Developed an **ML pipeline** integrating 1.5 M+ data points from multiple **Adobe analytics dashboards**.
- Engineered **success metrics** and activity-to-adoption mappings for **predictive modeling** of user engagement.
- Optimized **hyperparameter tuning** for an **XGBoost** model processing 100 M+ rows, achieving a 40 % reduction in **processing time** within 3 months.
- **Delivered** reporting tool that transformed analytics into insights for leadership.

Business Development Representative • Internship

- **Automated** AI-driven email campaigns (+18% outreach), qualified 300+ enterprise leads, and boosted engagement +46% with targeted strategies.

PROJECTS

Apicus.io – Advanced RAG System (Apicus.io)

- **Engineered** vector DB for 500k+ automation combos (+50% retrieval accuracy).

- **Built** RAG pipeline with OpenAI + Azure AI optimizing automation recs in real time.
- **Developed** FastAPI + MongoDB backend with sub-100ms latency; Dockerized CI/CD on Azure, cutting deploy cycle 70%.
- **Drove** product strategy with **Agile methodologies**, scaling **beta adoption to 50+ users**.

SecuSpark – Gamified AI-Powered Security+ Exam Prep (SecuSpark.com)

- **Scaled** full-stack app to 1k+ monthly users with RPG-style progression & analytics.
- **Implemented** GPT-4 tools (explanations, mnemonics, adaptive difficulty, insights).
- **Developed** offline-first IndexedDB architecture with <50ms edge AI latency.

DigitizeMD – Analog-to-Digital Media Conversion Platform (DigitizeMD.com)

- **Built** Next.js 15 / React 19 app for order scheduling, payment, and admin workflows.
- **Integrated** Clerk auth, Prisma + PostgreSQL, and Stripe webhooks for pricing & shipping.

Game ML Overlay

Freelance

- Developed and fine-tuned a **YOLOv8** model for real-time player detection in gaming environments.
- Leveraged **CUDA** and GPU acceleration to maintain **30 FPS** inference during gameplay.
- Utilized **Python, PyTorch**, and **Albumentations** for data preprocessing, augmentation, and model training, attaining high precision and recall.

Healthcare Cost Navigator – (healthcare-cost-navigator.vercel.app)

- **Built** a full-stack app that transforms Medicare's hospital pricing dataset into a conversational search tool for patients and analysts.
- **Engineered** a PostgreSQL + PostGIS + pgvector warehouse (2.7M+ rows) enabling geospatial radius queries and semantic SQL template matching in <20 ms.
- **Integrated** GPT-4o for NL→SQL parsing with normalization and safety checks, delivering streaming answers in ~1.5s end-to-end.
- **Deployed** the database and FastAPI backend on a single AWS EC2 t3.micro instance with Docker Compose for one-command setup.

EDUCATION

Bachelor of Science in Computer Technology Network Enterprise Infrastructure

Bowie State University • GPA: 3.5

Bowie State University

Relevant Coursework: Network Security, Java OOP, Intrusion Detection, Enterprise Server Administration, Information Systems

CERTIFICATIONS

Azure AI Fundamentals (AI-900)

Microsoft

Azure Fundamentals (AZ-900)

Microsoft

SKILLS

Software & Development: ASP.NET Core, Azure Function, C# 10/11, Claude Code CLI, Cursor AI IDEs, Docker Compose, Express.js, FastAPI, Flask, GitHub Actions, GitHub Copilot, Java OOP, JavaScript, kubectl/k9s, MSIX packaging, .NET 6/8, Next.js, React, TypeScript, Vercel, WPF/WinForms

Machine Learning & AI: AI, AI-driven automation, and backend skills, automation, Azure AI, Azure AI Fundamentals (AI-900), Hugging Face, Hyperparameter tuning, Machine Learning Engineer, ML pipeline, OpenAI Assistants, PyTorch, Ranking algorithms, Retrieval-Augmented Generation (RAG), Sentiment analysis, YOLOv8

Data Management & Databases: Azure Cosmos DB, Database Maintenance, Data Extraction, Data Integrity, Large-scale data infrastructure, MongoDB, SQLite, Vector Databases, Vector search database

Cloud & Infrastructure: Azure Fundamentals (AZ-900), Azure (VMs, Container Registry, Docker, GitHub Actions, Hardware/software integration, Kubernetes, Web Apps), Win32 API

Business & Communication: Business Development, Collaboration & Communication, customer service, detail-oriented, Interpersonal communication, LinkedIn Navigator, Make.com, Microsoft Excel, Microsoft Office Suite, Microsoft Outlook, Microsoft PowerPoint, Microsoft Word, multitasking, problem-solving, Salesforce, User Growth & Product Expansion, Zapier

Research & Analysis: Correlation analysis, Data Analysis, Feasibility Studies, Feature importance extraction, Predictive modeling, Project Research, Scikit-learn, Statistical Analysis, Technical indicator-based trading

Automation & CI/CD: API & Backend Architecture, API Orchestration, CI/CD, CI/CD & Deployment, Large-Scale Workflow Automation, OpenCV