Jae Birdsall

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EDUCATION

Penn State University	University Park, PA
College of Engineering	*August 2022 – May 2026*
Bachelor of Science in Computer Science	**GPA: 3.4**

SKILLS

Languages: Python, TypeScript, JavaScript, Java, C++, SQL, HTML/CSS
Web: React.js, Angular, Next.js, Node.js, Express.js, Flask, FastAPI, Spring Boot, Tailwind CSS
AI & ML: PyTorch, NumPy, OpenCV, YOLOv8, Hugging Face Transformers, MLflow
Developer Tools: AWS, GCP, Git, Docker, PostgreSQL, MySQL, MongoDB, Linux, Jira, Azure, n8n, Tableau

EXPERIENCE

West Shore Home — January 2026 – Present
Applied AI Intern — *Mechanicsburg, PA*

- Designed a **no-code platform for building AI agents**, allowing non-technical teams to deploy and manage agents
- Integrated Power BI, Salesforce, Microsoft Teams, and Azure Logic Apps tool connections, enabling agents to query SLA dashboards and CRM data, create automated workflows, and directly message teams with alerts and reports
- Deployed an AI evaluation system to **rate 5,000+ daily sales calls** and provide coaching insights to management

Human Technology Interaction Lab — May 2025 – December 2025
Machine Learning Research Assistant — *University Park, PA*

- Improved pedestrian detection on DriveGPT4 driving model by training on synthetic scenarios in CARLA simulator
- Automated scenario generation in Python, **using Claude API to design 7,500+ scenes** targeting model weaknesses
- **Presented weekly Tableau dashboards** comparing model metrics in MLflow, identifying training gaps and priorities

Jiayou Tennis — April 2025 – August 2025
Software Engineer Intern — *Seattle, WA*

- Created an AI tennis coaching platform that analyzes user-uploaded footage for player shot and position patterns
- **Developed a Python FastAPI** using YOLOv8 to map ball and player position and velocity in a virtual court environment, aggregating visual data into structured JSON documents, **leading to an 85% reduction in API costs**
- **Led an Agile development team of 4 junior interns** through the complete software development life cycle in Jira

PROJECTS

WatchOut (HackPSU Finalist) | *React Native, PyTorch, FastAPI, Bun, PostgreSQL* — October 2025

- Designed a **real-time crime detection system** deployable on existing camera feeds via live **WebSocket** streaming
- Trained a lightweight **PyTorch CNN** for binary classification of video frames, enabling cheap initial screening before escalating flagged clips to **Gemini 2.5 Pro** for contextual crime-type classification and **automated incident reporting**

Pulse | *Java, Spring Boot, Angular, PostgreSQL* — September 2025 – October 2025

- Created **CI/CD monitoring dashboard** with AngularJS and Java, aggregating GitHub Actions data across **25+ repos**
- **Automated tracking of 200+ deployments** with custom **Spring Boot API**, cached in PostgreSQL for faster queries

Timely (HackPSU Entry) | *React, MongoDB, Google Cloud Platform, Docker* — March 2025

- Built an AI calendar assistant leveraging Gemini API for automated scheduling on Google Calendar and Outlook
- Deployed **Dockerized app to Google Cloud Platform** via Cloud Build CI/CD, storing chat history in MongoDB

LEADERSHIP

Korean Student Association	May 2024 - November 2025
President	*University Park, PA*
Asian Student Association	April 2023 – May 2025
President	*University Park, PA*