

Jae Birdsall

(717)-713-6945 | jaeminbirdsall@gmail.com
[linkedin.com/in/jaeminbirdsall](https://www.linkedin.com/in/jaeminbirdsall) | github.com/jaeminbird | jaebirdsall.com

EDUCATION

The Pennsylvania State University
College of Engineering
Bachelor of Science in Computer Science

University Park, PA
May 2026
GPA 3.45

SKILLS

Languages: Python, Typescript, Javascript, SQL, Java, PHP, HTML/CSS
Frameworks: React.js, Next.js, Node.js, Express.js, Flask, Bootstrap, Tailwind CSS
Libraries: PyTorch, TensorFlow, Scikit-Learn, Pandas, NumPy, Plotly
Developer Tools: AWS, GCP, Git, Docker, MongoDB, MySQL, Linux, CI/CD, Jira, GitLab

EXPERIENCE

Human Technology Interaction Lab

Machine Learning Research Assistant

State College, PA
May 2025 - Present

- Train and fine-tune **ResNet models on 50,000+ traffic images** for real-time scene classification, **achieving 92% accuracy**
- Optimize **TensorFlow data pipelines** with caching, prefetching, and mixed precision, cutting model training time by 40%
- Deploy computer vision models to **edge devices with TensorFlow Lite**, enabling **real-time inference** with 30ms latency
- **Deliver weekly technical reports** with performance visualizations **showcasing model capabilities** and training optimizations

JiaYou Tennis

Software Engineer

Seattle, WA
Apr 2025 - Present

- Develop immersive **augmented reality tennis trainer** for Snapchat Spectacles with **Typescript** and **Lens Studio SDK**
- Implement predictive trajectory modeling with **physics simulation and computer vision** enabling anticipatory swing guidance
- Train custom **YOLO computer vision model** for tennis racket detection across diverse environments to 91% accuracy
- **Manage Agile development team of 4 engineers**, organizing sprints and tasks to **deliver 94% of milestones on schedule**

Albany Upstate Accounting & Tax

Web Development Intern

Albany, NY
May 2024 - Aug 2024

- **Presented 5+ UI/UX prototypes to clients** in Figma, iterating on feedback to **reduce development time by 2+ sprints**
- Created full-stack website with **HTML/CSS, JavaScript, Bootstrap** and **Docker containerization** for scalable deployment
- Built **10+ dynamic PHP content modules** in **Laravel/October CMS**, automated deployment with **GitLab CI/CD** pipelines

Mindburn Solutions

Support Technician

Harrisburg, PA
July 2021 - Aug 2023

- Designed **visual report system for MySQL database**, generating charts and graphs that helped inform team decisions
- Supported **disaster recovery** for multiple companies, **preserving 100,000+ customer records** after security breaches
- Configured **secure network environments** and **server deployments** for **5+ enterprise clients** including Amazon facilities

PROJECTS

Review Sentiment Analysis Model | Python, Flask, PyTorch, Scikit-Learn, NumPy, Pandas

github.com/jaeminbird/RSAM

- Created **automated data pipeline** processing **1,500+ professor reviews** with **Pandas** data processing and **BeautifulSoup**
- Fine-tuned **dual ML models** achieving **91% accuracy** using **PyTorch** and **DistilBERT** for comparative performance analysis
- Deployed **interactive Flask dashboard** with **Plotly visualizations** enabling real-time filtering and analysis on **70+ metrics**

Timely (HackPSU Entry) | React, Next.js, OpenAI API, GCP, MongoDB

github.com/jaeminbird/Timely

- Pitched and **developed AI calendar assistant**, leveraging **GPT-4o** and **Calendar APIs** to turn conversations into schedules
- Designed efficient **MongoDB database**, supporting **200+ chats** across **30+ concurrent users** with **150ms response times**
- **Secured user authentication** with **OAuth 2.0** and **Google Cloud Platform** to protect conversation and session privacy

LEADERSHIP

Korean Student Association

President

University Park, PA
May 2024 - Present

- Lead diverse team of 12 board members, **coordinating cultural events and educational programs** for **300+ students**
- **Negotiate 10+ sponsor deals** for 500+ attendee cultural showcase, securing \$8,000+ through local business partnerships
- Coordinate event logistics **across multiple venues and timelines**, **managing budgets and vendor relationships**

Asian Student Association

President

University Park, PA
Apr 2023 - May 2025

- Developed **multi-org partnerships** with 5 student groups, generating **\$5,700+ through collaborative fundraising**
- **Drove membership growth by 27% to 325+ active members** through targeted outreach and social media campaigns