Kyle Park

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EDUCATION

The Ohio State University   Columbus, OH
Bachelor of Science in Computer Science Engineering, Minor in Mathematics   *August 2023 – May 2027*
- **Awards**: National Buckeye Scholarship, Dean's List   **GPA**: 3.75
- **Coursework**: Artificial Intelligence, Machine Learning, Data Structures & Algorithms, Low Level Programming, Data Mining, Database Systems, Operating Systems, Computer Networking, Software Development, Web Applications, Linear Algebra

TECHNICAL SKILLS

Languages: Python, Java, C#, SQL, React, JavaScript, HTML/CSS
Tools & Libraries: FastAPI, SQLAlchemy, PostgreSQL, Node.js, Express.js, PyTorch, scikit-learn, Pandas, Alembic, AWS, MongoDB, Docker, Linux, Git, Jira, Slurm, Postman, SAM2

EXPERIENCE

Imageomics Institute   Sep 2025 – Present
Computer Vision Research Assistant   *Columbus, OH*
- Co-developed BALLER120 for CVPR 2026, a curated dataset of **4,500+ free-throw sequences from 120 NBA players**, resulting in **9000+ appearance and silhouette clips** for controlled identity recognition research
- Built a full segmentation pipeline using Roboflow and SAM2, achieving **frame-accurate masks across 100% of clips**
- **Reduced manual film retrieval time by 10 hours a week** by developing a Python script using the NBA API to instantly deliver player and shot-specific clips, helping streamline film analysis for the research team
- Designed reproducible HPC workflows on OSC's A100 systems using PyTorch + FlashAttention, ensuring stable GPU memory usage, faster batch processing, and consistent job scheduling through Slurm

Blue Cross Blue Shield   Jun 2025 – Aug 2025
Software Engineer Intern   *Chicago, IL*
- **Saved 90 hours and $52K annually** by optimizing ingestion, cleaning, normalization of cohort data with Python and Pandas
- Designed scalable MongoDB schemas and REST APIs using FastAPI to optimize query performance, **reducing reporting delays from 1 week to same-day** and **enabling cross-region self-serve access to 3K+ records**
- Containerized data pipelines and REST APIs using Docker, creating reproducible environments and deployment workflows

The Ohio State University   Sep 2024 – Present
Introduction to Java Teaching Assistant   *Columbus, OH*
- **Assist 40+ students each semester** in Introduction to Java during lab sessions **2 times a week**, providing guidance with programming fundamentals, basic algorithms, and data structures, through one on one support and troubleshooting
- Hold weekly office hours providing constructive criticism for **over 50 homeworks, labs, and project assignments**
- **Improved student grades by an average of 3% each semester**, reflecting effective teaching methodologies

PROJECTS

Spotted Lanternfly Predictor | *Python, Pandas, NumPy, Plotly*
- Developed a spatial–temporal prediction model forecasting Spotted Lanternfly spread across **17 Ohio counties**, generating county-level infestation timelines through 2027 using proximity, forest composition, and urban density metrics
- Engineered a composite ecological risk scoring system for **22 host tree species** by weighting abundance rankings against species-specific sensitivity data, identifying Maple as the highest-risk species
- Estimated a **$38.7M annual economic impact** to the Columbus region via geospatial modeling and scaled economic-loss calculations derived from Pennsylvania historical data (2014–2020)

BMW Spotify Integration | *Python, OpenCV, MediaPipe, Spotify Web API*
- Earned **2nd place at Make OHI/O with over 1200+ participants**, imitating BMW's Gesture Control feature
- Engineered hands-free music control system using computer vision and MediaPipe hand tracking, achieving 60 FPS real-time performance with 5 distinct gesture types, requiring 1.5-second hold validation to prevent false triggers
- **Optimized performance by 98%** through API caching by reducing calls from 60/sec to 1/sec, while implementing Spotify-branded UI with live album artwork, progress tracking, and dynamic text for song metadata display

LEADERSHIP & INVOLVEMENT

Sponsorship Lead   Sep 2024 – Sep 2025
OHI/O   *Columbus, OH*
- Lead networking with **100+ companies annually**, raising **over $115,000** throughout the year for all OHI/O events
- Direct financial planning, allocating funds across programs and club operations for members and **2600+ CSE students**