Kyle Chiem

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Education

The Pennsylvania State University – Schreyer Honors College — University Park, PA
Bachelor of Science in Computer Science and Math, College of Engineering — *Aug. 2024 - Dec. 2027*
Cumulative GPA: 4.00/4.00
Activities: Nittany AI, Humanoid Robotics Club, PSU IEEE, HackPSU

Strath Haven High School — Wallingford, PA
High School Diploma — *Sep. 2020 - Jun. 2024*
Cumulative GPA: 4.00/4.00 — Honors: National Honors Society

Experience

The Pennsylvania State University — May 2025 - Present
Research Intern — *University Park, PA*
- Researched **balance prediction in humanoid robot ego-centric vision** across various randomized environments
- Performed **parallel simulations** on **Isaac Lab** to train neural networks and transferred results onto real robotic systems
- Trained **deep reinforcement learning networks and convolutional neural networks** to generate heatmaps indicating a robot's postural stability based on its visual perception of the environment

LPAC - Laboratory for Perception, Action, and Cognition — February 2025 - Present
Undergraduate Research Assistant — *University Park, PA*
- Procured **motion capture (MoCap) data** using Vicon Motion Capture tools under Dr. Yanxi Liu
- Processed motion capture data through **transformer models** to predict foot pressure & center of mass in balanced poses
- Applied **hyperparameter tuning** using **Optuna** to refine model and loss parameters for publication at CVPR '26

Temple University — June 2023 – August 2023
Research Assistant — *Philadelphia, PA*
- Researched **Graph Neural Networks** to boost node connection prediction accuracy by **10%** under Dr. Hongchang Gao
- Utilized **PyTorch API** on Google Colab to implement and test optimized neural networks

Projects

Tetris DQN | *PyTorch, TensorBoard, NumPy, Git* | *GitHub* — May 2025 - Present
- Designed a **deep Q-learning network** with **PyTorch and NumPy** to master Tetris
- Leveraged **TensorBoard** in analyzing performance metrics to improve overall model structure and hyperparameters
- Implemented a **step decay learning-rate scheduler** to converge onto an effective method of playing the game

MacroMate | *Git, FastAPI, SQAlchemy, Flutter* | *GitHub* — October 2024 - November 2024
- Won **2nd Best Overall** with 4 others in HackPSU **out of 50+ teams**
- Implemented frontend app using **Flutter** that gives users personalized meal plans from the Penn State Dining Halls based on their biometrics and weight goals using **OpenAI API**
- Developed backend obtaining and storing Dining Hall menus for the website and app using **FastAPI and SQLAlchemy**

Additional Activities

Helen Kate Furness Library — October 2019 – June 2024
Front Desk & Club Volunteer — *Wallingford, PA*
- Dedicated **100+ hours** to checking out and locating books for parents and children
- Managed a week-long STEM club with 3 others teaching **20+ children** various STEM concepts through curated interactive activities

Technical Skills

Languages: Java, Python, JavaScript, Kotlin, C, C++, HTML
Technologies: Git, NumPy, PyTorch, Gradle, Firebase, GitHub Actions, Linux
Concepts: Full stack Development, Front end, Back end, Unit Testing, Scalability, API Integration, Scalability, Memory Optimization, MVVM