Kevin Huang

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Education

Purdue University West Lafayette, IN
Bachelor of Science; Majors in Computer Science, Mathematics, & Statistics Expected Dec 2026

- Cumulative GPA: 4.0/4.0, Dean's List and Semester Honors (All semesters)
- Relevant Courses: Data Structures and Algorithms, Computer Architecture, Programming in C/C++, Object-Oriented Programming in Java, Competitive Programming, Discrete Math, Data Mining & Analysis (Stanford University)

Technical Skills

- Programming Languages: Python, Java, C, C++, Ruby, JavaScript, TypeScript
- Frameworks & Libraries: PyTorch, TensorFlow, React.js, Node.js, Express.js, Flask, NumPy, Pandas
- Tools & Technologies: Git, GitHub, Docker, Firebase, Google Colab, RESTful API development, Agile, Scrum

Professional Experience

Polyspawn AI Boulder, CO
Software Engineering Intern May 2024 – Aug 2024

- Developed React application for cutting and labeling animation sprite sheets, integrating Google Drive API for data upload.
- Enhanced Stable Diffusion model for 2D animation generation by rewriting components to address shaping issues.
- Implemented positional encodings across animation frames for attention mechanisms in transformer backbone.
- Leveraged PyTorch Lightning for efficient model training and implemented Low Rank Adaptation (LoRA) for fine-tuning.
- Collaborated with product manager to refine machine learning pipelines and create design documentation.

TE Connectivity Plymouth, MN
Machine Learning Engineer Nov 2023 – Jun 2024

- Filed 2 patents for innovative diffusion action segmentation pipeline and proprietary glove detection labelling interface.
- Deployed software in manufacturing lines, estimated to increase time-study efficiency and save **$170k** annually.
- Fine-tuned YOLOv9 model for hand and glove detection, achieving **98.8%** precision and **97.8%** recall.
- Constructed React application for video data labeling and generating training data via heuristic segmentation.
- Trained diffusion transformer model for action sequence prediction (Testing Accuracy: **88.06%**).

HUMN Capital West Lafayette, IN
Natural Language Processing Engineer Jan 2024 – May 2024

- Engineered end-to-end data pipeline to analyze employee meetings and provides personalized feedback.
- Generated and refined transcripts using OpenAI APIs and performed Natural Language Processing (NLP) tasks such as sentiment analysis and entity recognition using custom Python algorithms and IBM Watson API.
- Tested demo on approximately 15 sample interview videos collected from real interviews.
- Presented solution at Purdue Data Mine Spring 2024 symposium, receiving positive feedback from 5 other startups.

Purdue Autonomous Robotics Club (ARC) West Lafayette, IN
Development Team Aug 2023 – Present

- Overhauled previous club webpage using React.js and Tailwind CSS, increasing daily user engagement by 30%.
- Integrated Firebase database and implemented data validation features for the Robotics and Intelligent Systems Expo (RISE) web application, providing event information and streamlining sign-ups for over 25 labs, organizations, and companies.

Fairview Web Team Boulder, CO
Full Stack Developer Aug 2021 – May 2023

- Maintained and innovated on official school website (300+ daily visitors) in HTML, CSS, JavaScript, Ruby on Rails.
- Collaborated with team members to resolve technical issues and discuss changes.
- Communicated with school administration and staff for information updates, such as school news and online instructional resources, and general maintenance requests.

Projects

DagsHub x ML@P Hackathon | *PyTorch, DVC, MLflow, Computer Vision* Oct 2023 – Dec 2023

- Won first prize in a scene graph generation challenge out of 16 teams.
- Implemented "Graph R-CNN" pipeline, training Relational Proposal Network (RePN) and attentional Graph Convolutional Network (aGCN) on approximately 5,000 images (11h of training) from the Visual Genome dataset.

Housing Camper | *Bash, PowerShell, Discord API, Web Scraping* Oct 2023 – Nov 2023

- Developed command-line application to scrape university portal for vacant rooms, helping myself and others find housing.
- Built in Node.js and JavaScript, with functionality as both local application and Discord bot.

Purdue Mosaic | *Concurrency, RESTful API* | https://purdue-mosaic.onrender.com/ Sept 2023 – Oct 2023

- Led hackathon team to develop a synchronous pixel art web application where users draw on shared downloadable canvas.
- Created frontend using HTML, CSS, JavaScript; programmed backend APIs with Express.js, Node.js, and Socket.IO.