Xipeng Wang

wang4706@purdue.edu · 949-485-9150 · linkedin.com/in/xipengwang-alex

Education

Purdue University - West Lafayette May, 2020 – Dec, 2024

Bachelor of Science (B.S.) - Dual Major in Computer Science & Game Development and Design *GPA: 3.61/4.0*

- Dean's List & Semester Honors 2020 – Present

Specialized Skills

Programming Languages: Python, Java, C & C++, SQL, JavaScript, HTML, CSS, R, Shell/Bash
Tools: OpenCV, TensorFlow, PyTorch, Git, React, PostgreSQL, MongoDB, Node.js, Express.js, Flask, Unreal Engine
Courses: Analysis of Algorithms, Artificial Intelligence, Data Mining & Machine Learning, Robotics, Systems Programming, Information Systems, Data Structures and Algorithms, Computer Architecture, Programming in C

Work Experience

Front-end Developer Aug, 2023 – Present

Purdue Data Mine

- Contractor on a Beck's Hybrids breeding project, working on front-end development with the breeding team

Software Developer, Resume Viewer Aug, 2023 – Present

Purdue Data Mine

- Led the development of the Resume Viewer for Purdue's Data Mine Program, crafting a Full Stack solution to provide recruiters with an intuitive platform to peruse and filter through hundreds of student profiles
- Employed a robust tech stack comprising MongoDB, Node.js, Express.js for back-end, and React for front-end
- Collaborated closely with a team of UX designers, significantly enhancing the overall user experience

Undergraduate Research Fellow May, 2023 – Present

Jain Research Lab

- Developed a high-fidelity SAE Level III autonomous vehicle simulator in Unreal Engine 5, facilitating data collection for human subject experiments and cognitive state modeling through controlled driving scenarios
- Designed a modular framework for swift setup of experimental trials, granting researchers full creative control
- Collaborated with PhD students on experiment design, solving complex challenges to meet research objectives

Projects

Software Developer, Lets-Ride Project

Purdue University

- Released a platform hosting NFL data analytics, providing match predictions, player statistics, and team rankings
- Utilized PostgreSQL, Flask, Node.js, and React to create a user-friendly interface for real-time data management and designed a comprehensive relational database schema, optimizing data relations and performance
- Devised a prediction algorithm using current and past seasons' performance, providing insights for future games

Undergraduate Computer Vision Researcher

Purdue Data Mine

- Developed a real-time Computer Vision aided application for pet identification and health diagnostics for Elanco
- Designed and implemented a robust deep neural network for accurate pose estimation and classification
- Employed a mix of transfer learning and data augmentation to optimize the performance of an object detection model by 23%, enabling accurate breed classification and enhancing the generalizability

Undergraduate Computer Vision Researcher

Purdue RoboMasters

- Led the development of a photo-realistic synthetic data generation pipeline for object detection models, providing a cost-effective and scalable solution to the challenge of data acquisition
- Utilized feedback loops to pinpoint model deficits in edge cases, generating enhanced targeted data
- Improved model performance by 20% and accelerated training cycles, enhancing generalizability and robustness

PROS Kernel Developer

Purdue ACM SIGBots

- Maintained the PROS software, providing a stable and powerful platform for global developers
- Enabled efficient coding and optimization for competition robots while ensuring close-to-hardware control