Xipeng Wang

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Education

Purdue University May, 2020 – Dec, 2024
Bachelor of Science (B.S.) in Computer Science, Game Development and Design *West Lafayette, IN*

- Dean's List & Semester Honors 2020 – Present
- GPA: 3.59/4.0

Specialized Skills

Programming Languages: C & C++, Java, Python, R, SQL, JavaScript, HTML, CSS
Tools: OpenCV, Tensorflow, PyTorch, Unix/Bash, Git, ROS, Latex, React, Node.js, Flask, Unreal Engine, Maya
Courses: Analysis of Algorithms, Artificial Intelligence, Data Mining & Machine Learning, Robotics, Systems Programming, Information Systems, Data Structures and Algorithms, Computer Architecture, Programming in C
Certificate: NVIDIA DLI for completion of Fundamentals of Deep Learning – 2022

Research Experience

Undergraduate Research Fellow May, 2023 – Present
Jain Research Lab

- Developed a high-fidelity Level II driving simulator using Unreal Engine 5, supporting various driving scenarios set in a dynamic city environment for human subject experiments
- Engineered a modular framework for fast building of experimental trials, granting researchers full creative control
- Implemented numerous data collection strategies such as devising segmentation data for gaze mapping and fixation identification, laying the groundwork for a comprehensive modeling of human cognition

Undergraduate Researcher Aug, 2022 – May, 2023
Purdue Data Mine

- Developed a real-time computer vision based solution for pet identification and pose detection for Elanco
- Designed and implemented a deep neural network using PyTorch for pose classification
- Employed a combination of transfer learning and hyperparameter tuning to optimize the performance of an existing object detection model, enabling accurate breed classification

Undergraduate Researcher Aug, 2022 – May, 2023
Purdue RoboMasters

- Developed an inhouse synthetic data generation pipeline for object detection in robotics competition
- Utilized Autodesk Maya to build photo-realistic virtual environments with numerous randomizable parameters
- Enabled detection of unseen classes and improved model performance and generalizability by 16%

Project/Other Experience

Undergraduate Teaching Assistant Jan, 2023 – May, 2023
Purdue University

- Leveraged experience in Systems Programming and held lab sessions
- Took a proactive approach in mentoring students, offering individualized support through complex concepts

PROS Kernel Developer Aug, 2022 – Present
Purdue ACM SIGBots

- Maintained and optimized the globally utilized PROS Kernel software, ensuring a high-performing and reliable platform for VEX Robotics teams to code their competition robots
- Collaborated on the development of an autonomous mode for competition robot in VEXU, leveraging control algorithms including PID controller and Odometry for precise robot model prediction in run-time

Lets-Ride Project Aug, 2022 – Dec, 2022
Purdue University

- Led full-stack development to create a robust platform hosting NFL match predictions and team statistics
- Designed interactive web pages utilizing React and Node.js, elevating user expreience
- Maintained and optimized a comprehensive team database by leveraging PostgreSQL

COSINE Tutor Aug, 2022 – Present
Purdue COSINE

- Collaborated with students to work on challenging subjects such as Multivariate Calculus and Linear Algebra, enhancing their understanding on the subject while promoting growth of problem-solving skills
- Provided individualized attention while factoring in their current grasp on the topic, meeting their diverse needs