Xuyang Chen

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EDUCATION

BS. in Computer Science — **Graduation**
- Purdue University, West Lafayette IN — June 2025
- Current Coursework: Multivariable Calculus, Problem Solving and Object-Oriented Programming, Engineering Technology Applications

Irvington High School — **Graduated**
- GPA 4.2 Weighted — June 2021
- AP Tests (scored 5): Calculus BC, CompSciA, Literature, Chemistry, Statistics

EXPERIENCE

Kaiser Permanente Internship *(via PilotCity)* — **2019-2020**
- Designed and programmed small indoor vehicle for detecting unclean areas in hospital
- ROS system running OrbSLAM3 on Jetson Nano

FIRST Tech Challenge *Team Captain (2020-21), Software Lead (2019-21)* — **2017-2021**
- Led team of 15 in programming, prototyping, and fabricating a robot with autonomous capability in three months
- Coordinated mechanical and software subdivisions
- Manage $7000 in team funds and sponsorships
- Team advanced to North California Regionals and won Inspire Award

Autonomous Motorsports Purdue — **2021-current**
- Develop navigation and LIDAR software for autonomous EvGrandPrix car
- Tuning parameters for mapping and odometry nodes

CoRAL Lab Independent Study — **2021-current**
- Implementing reinforcement learning paper *Spatial Action Maps* (arXiv:2004.09141)

PROJECTS

movForth Compiler github.com/reschivon/movForth — **2021-current**
- Compiles stack-based, concatenative Forth code into LLVM IR
- Designed algorithm for converting stack code into SSA format (even across control flow merges and splits)

BlueJay Image Processing Pipeline github.com/Future14473/BlueJay — **2019-2020**
- Open source OpenCV Image processing algorithm that locates FTC game elements and adjusts for different lighting and noise conditions
- Runs in realtime on Android Phone (Moto G4)

WORK

Java Private Tutor — **2021 summer**
- Created project-based curriculum where student built clone of 3D voxel game Minecraft
- Integrated modularization, polymorphism, debugging, and iterative testing into learning experience
- Earned $35 per hour, 2 hours per week over 9 weeks

SKILLS

Java — Robotic Control, Android, Graphics
C++ — Compilers, Raytracing, ROS, SLAM
Languages — Cantonese, Mandarin, English

OpenCV
Forth
LLVM

Autodesk Fusion 360
3D Printing