Kevin Niu

kniu34@gatech.edu | 470-636-5696 | Atlanta, GA | linkedin.com/in/kevinsniu

EDUCATION

Georgia Institute of Technology (GT) August 2024 - December 2026 (Expected)
B.S. Computer Engineering (Computing Hardware & Emerging Architectures + Robotics) GPA: 3.6/4.0
University of Illinois at Urbana-Champaign (UIUC) August 2023 – May 2024
Computer Engineering, Transfer with 53 Credits GPA: 3.7/4.0

EXPERIENCE

Illinois Electric Motorsports, UIUC
Circuit Design Team August 2023 – May 2024

- Designed PCB in Altium for vehicle sensor board by incorporating filtering techniques, ICs, and STM32 to process analog sensor inputs and pass data to main board through vehicle-wide CAN bus
- Led a team of 3 to establish a validation procedure for vehicle Accumulator fan current draw relative to fan RPM by using an Arduino and hall-effect current sensor, reducing extraneous current draw by 20%
- Assembled COSMX pouch cells, voltage sense and thermistor wires for Accumulator segments, resulting in zero loss in battery telemetry data

iRobotics, UIUC
Robobrawl Comittee August 2023 – May 2024

- Developed and built embedded system to facilitate communication between judges and competitors with extensive documentation for the replication and repair of said system
- Programmed two ESP32s to communicate wirelessly over ESP-NOW and display wins/losses and ready status over asynchronous webserver using AJAX, reducing wait time between matches by 10%

Combat Robotics Electronics Lead August 2023 – May 2024

- Led a team of 10+ members to source and integrate electronics for a 30-pound battle bot while remaining under-budget and meeting all production deadlines
- Programmed AM32 and BLHeli32 ESCs to optimize BLDC motor performance and prevent motor burnout, increasing reliability and reducing spare part cost

Gladiator Robotics FRC 5019, Johns Creek High School
Design and Electrical Lead August 2019 – May 2023

- Designed, manufactured, and assembled the tube chassis, drivetrain modules, and scoring mechanism of two competition robots using SOLIDWORKS and OMAX Maxiem Waterjet
- Trained 30+ members in Computer Aided Design, fabrication, and electrical fundamentals

PROJECTS

Target-Tracking Turret May 2024 – August 2024

- Designed, manufactured, and assembled turret and loading mechanism to shoot Nerf High-Impact-Rounds at 100+ feet per second at a rate of up to 1200 rounds per minute; hardware controlled by Arduino over Serial by computer running OpenCV performing object detection and tracking
- Maintained consistent wire harness practices to efficiently package electronic speed controllers, MOSFETs, brushed, brushless, and stepper motors for control of turret

PIDCar, UIUC January 2024 – May 2024

- Designed an analog PID controller using op-amps on a custom motor-driven car to implement braking such that the car will halt at a near-zero distance from any barrier and at any initial velocity
- Verified PID controller behavior against simulated voltages in Falstad using Keysight oscilloscope to guarantee consistent system behavior through hundreds of repetitions.

SKILLS/HOBBIES

Languages	Java, Python, C/C++, MySQL
Tools	Altium, Altera Quartus, Certified SOLIDWORKS Professional, Fusion360, MS Excel, Git, Linux
Equipment	3-Axis CNC, Waterjet, Lathe, 3D-Printing, Soldering, Crimping, Multimeter, Wire Harness, Serial Communication, CAN bus, Raspberry Pi, Arduino, Nvidia Jetson
Hobbies	Photography, Skating, Poker, Woodworking