Daniel Kim

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Education

University of Illinois at Urbana-Champaign — Urbana, IL
Bachelor of Science in Electrical Engineering — Aug 2025 – May 2029
Relevant Coursework: Digital Signal Processing, Embedded Systems, Control Systems, Machine Learning, Robotics, VLSI Design

GPA: 3.92/4.0

Technical Skills

Languages and Technologies: C, C++, Python, MATLAB, Verilog, Assembly, TensorFlow

Tools and Frameworks: Arduino, Raspberry Pi, LTspice, Git, Docker, AWS

Projects

Smart Grid Optimization System | *Python, MATLAB, IoT*

- Designed a smart grid optimization system to reduce energy consumption by 20% in urban areas
- Implemented real-time monitoring using IoT sensors and data analytics for energy distribution
- Developed predictive models for energy demand using time-series analysis

Autonomous Robot Navigation | *C++, ROS, OpenCV*

- Built an autonomous robot capable of navigating complex environments using SLAM algorithms
- Integrated computer vision for object detection and avoidance with 95% accuracy
- Deployed the robot in a simulated environment for testing and validation

FPGA-Based Image Processor | *Verilog, VHDL, Xilinx*

- Developed an FPGA-based image processing system for real-time edge detection
- Optimized hardware design to achieve 30% faster processing speeds
- Implemented a user-friendly interface for configuring image filters

Research Experience

Research Assistant - Robotics Lab — Jan 2028 – May 2028
University of Illinois at Urbana-Champaign — *Urbana, IL*

- Researched and developed algorithms for swarm robotics coordination
- Implemented path-planning algorithms for multi-robot systems
- Published findings in a top-tier robotics conference

Work Experience

Electrical Engineering Intern — Jun 2027 – Aug 2027
Tesla — *Palo Alto, CA*

- Worked on the development of autonomous vehicle sensor systems
- Optimized signal processing algorithms for LiDAR and radar data
- Collaborated with software engineers to integrate hardware and software components

Embedded Systems Intern — May 2026 – Aug 2026
Texas Instruments — *Dallas, TX*

- Designed and tested embedded systems for IoT devices
- Developed firmware for low-power microcontrollers
- Conducted performance testing and debugging of hardware prototypes