Daniel Patel

Boston, MA | 617-555-9876 | d.patel@example.edu | linkedin.com/in/danielpatel | github.com/danielp-code

Education

Massachusetts Institute of Technology — Cambridge, MA
Bachelor of Science in Mechanical Engineering — Aug 2024 – May 2028
Relevant Coursework: Thermodynamics, Fluid Mechanics, Robotics, Control Systems, Materials Science, CAD Design

GPA: 3.89/4.0

Technical Skills

Languages and Technologies: Python, MATLAB, C++, SolidWorks, ANSYS, LabVIEW, ROS

Tools and Frameworks: Git, Docker, AWS, Simulink, Arduino, Raspberry Pi, OpenCV

Projects

Robotic Arm for Precision Assembly | *Python, ROS, SolidWorks*

- Designed and built a robotic arm for precision assembly tasks in manufacturing
- Implemented inverse kinematics algorithms for accurate movement control
- Conducted performance testing and optimization for industrial applications

Autonomous Vehicle Simulation | *C++, ROS, Gazebo*

- Built a simulation environment for autonomous vehicle navigation using ROS and Gazebo
- Implemented path planning and obstacle avoidance algorithms
- Conducted performance testing and optimization for real-world deployment

Energy-Efficient HVAC System | *MATLAB, Simulink, ANSYS*

- Designed an energy-efficient HVAC system for commercial buildings
- Optimized thermal performance using computational fluid dynamics (CFD)
- Developed a control system for real-time energy management

Research Experience

Research Assistant - Robotics Lab — Jan 2023 – May 2024
Massachusetts Institute of Technology — *Cambridge, MA*

- Conducted research on swarm robotics and multi-agent systems
- Developed algorithms for collaborative task execution in robotic swarms
- Published findings in a leading robotics journal

Work Experience

Mechanical Engineering Intern — Jun 2024 – Aug 2024
General Electric — *Boston, MA*

- Designed and tested components for gas turbine engines
- Conducted thermal and structural analysis for engine components
- Collaborated with cross-functional teams to meet project deadlines

Software Development Intern — May 2023 – Aug 2023
Boston Dynamics — *Waltham, MA*

- Developed software for robotic control systems
- Implemented algorithms for motion planning and obstacle avoidance
- Optimized code for real-time performance in dynamic environments