

NIMRAT GILL

SYSTEMS + SOFTWARE ENGINEER

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PROFILE

I'm a systems engineer with a passion for aerospace, driven by a desire to innovate and solve complex challenges. My journey into full stack development began with a curiosity to build dynamic solutions that blend technical depth with real-world impact. With hands-on experience in both engineering and development, I'm excited to apply my problem-solving skills and adaptability to contribute to transformative projects in the engineering space.

SKILLS

C/C++, Python, Javascript, HTML, CSS, Node, React, Express, MySQL, Agile Development, MSOffice, Visio, Document Object Model (DOM) APIs, Web APIs, User Authentication, OAuth, GitHub, MATLAB, JAVA, Solidworks, ROS, OpenCV, Surface Mount Soldering, PCB Designing, FPGAs, Embedded Systems, Linux, MacOS, Windows

PROJECTS

KinetiSCAN

OCT 2024, BRAINSTATION CAPSTONE

- Developed a joint movement tracking app using React, Node.js, MediaPipe and computer vision for real-time analysis and range of motion feedback.
- Built a progress tracking system to visualize user data and monitor recovery over time.

BELL Impact | Bell Industry Hackathon

OCT 2024, BRAINSTATION HACKATHON

- Built a React front-end and Node.js back-end to showcase Bell's community initiatives, with a personalized quiz for tailored recommendations.

Design Engineer and CCO | Autonomous Luggage Carrying Robot

Fall 2023, SFU ENGINEERING CAPSTONE

- Collaborated with a five-member team to develop an autonomous airport luggage-carrying robot using ROS2 with SLAM and NAV2 packages.
- Implemented LiDAR and OpenCV for environment scanning and object detection to enhance safety.
- Crafted a finished product with a sturdy aluminum base using machine shop tools and SolidWorks.
- Acted as the company CCO to ensure smooth communication between the team and faculty.

EDUCATION

BrainStation | Diploma, Software Engineering

AUG 2024 - NOV 2024, VANCOUVER, BC

Simon Fraser University | Bachelors in Applied Science, Systems Engineering

SEPT 2018 - APR 2024, BURNABY, BC

EXPERIENCE

Production Engineer | Acura Embedded Systems

JAN 2024 - APR 2024, SURREY, BC

- Designed and built rugged computer systems, overseeing tasks like soldering, PCB fitting, assembly, testing, debugging, and calibration to meet stringent quality standards and specifications.
- Solely managed laser machinery to precision-cut over 150 components for rugged computer systems, ensuring efficiency and accuracy in production.

Research Assistant | SFU Nano device fabrication group

MAY 2021 - DEC 2021, BURNABY, BC

- Executed noise-to-signal ratio experiments for a nanotech rapid diagnostic detector to reduce noise by 40%.
- Improved data accuracy and efficiency through Python-based software enhancements for seamless testing.
- Optimized hardware via MOSFET soldering and CAD design to reduce device size and external interference.