NIMRAT GILL

SYSTEMS + SOFTWARE ENGINEER

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PROFILE

I'm a systems engineer 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.

SKILLS

Frontend:
Javascript, HTML, CSS, React, , Sass, Responsive Design, Typescript, React Native, OpenCV
Backend:
Node.js, Express.js, MongoDB, Web APIs, Knex, MySQL, OAuth, Postman
Devops:
Git/GitHub, Command Line, Vite, Jira, Docker, Netlify, Render, Figma, Agile Development, DOM, Heroku
Other Programming Languages:
C++, Python, MATLAB, Javascript
Hardware:
Microcontrollers, PCB Design, LiDAR, Soldering, FPGAs, Embedded Systems

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.