Sahil Devani

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Education

Toronto Metropolitan University — September 2021 – June 2025
Bachelor of Science (Honours) – Computer Science — *Toronto, ON*

- **Relevant Courses**: Data Structures & Algorithms, Web Systems Development, Artificial Intelligence, Database Systems, Discrete Structures, Operating Systems, Computer Security, Computer Networks, Data Science, Computer Graphics
- **Highlights**: Toronto Metropolitan Algorithms & Coding Club, 2x Dean's List Scholar

Technical Skills

Languages: Python, Java, JavaScript/TypeScript, C, SQL, HTML, CSS
Frameworks: React, Node.js, Express.js, OpenCV, NumPy, Flask, TensorFlow, Keras, Socket.IO
Tools: Git, Docker, Jira, Confluence, MongoDB, LangChain, GenAI, Vercel, AWS, GCP

Experience

Software Engineer Expert — July 2026 – Present
AfterQuery Experts — *Remote*

- Authored frontier-grade software engineering benchmark tasks (hundreds to thousands of lines) to evaluate autonomous coding agents across implementation, performance-optimization, and applied machine learning paradigms.
- Built automated grading systems that objectively score AI agent performance against hidden and visible test cases.
- Designed anti-cheat safeguards to prevent grading exploits ensuring reward integrity against adversarial agent behavior.

AI Engineer — September 2025 – June 2026
Outlier AI — *Remote*

- Applied Reinforcement Learning from Human Feedback (RLHF) to train, refine, and evaluate large language models.
- Hardened multimodal SWE benchmarks by injecting deliberate source-level defects into Dockerized repo snapshots.
- Performed code reviews and managed pull requests in GitHub, enforcing coding standards and seamless integration.
- Evaluated **retrieval-augmented generation (RAG)** agent trajectories over MCP, authoring rubrics scoring context retrieval quality, tool-use correctness, and downstream response accuracy.

Software Engineer Intern — May 2024 – August 2024
SparEx — *Remote*

- Collaborated with a team of 5 to redesign the company website, enhancing workflow efficiency through **Agile methodologies** and iterative development such as daily stand-ups, sprint planning, and code reviews.
- Enhanced loading speed, reduced bounce rate by 25% through image optimization using compression and lazy loading.
- Leveraged **Jira** for sprint/issue management, and maintained **Confluence** pages to centralize team documentation.
- Increased organic traffic by 40% via **SEO** strategies including keyword optimization and meta tag enhancements.

Projects

TMU Classifieds | *MongoDB, Express, React, Node.js*

- Developed a **MERN** stack commercial-grade web interface for a classified ads platform tailored to TMU students.
- Integrated a search functionality, ad-posting interface, admin dashboard and a secure communication platform.
- Utilized **MongoDB Atlas** to manage classified ads data, supporting scalability and efficient cloud-based architecture.

Lane Vision | *Python, Flask, React, OpenCV, NumPy, Socket.IO*

- Engineered a **full-stack** lane detection app streaming frames over WebSockets at <**5ms** server-side latency per frame.
- Implemented a lane detection pipeline chaining HLS color masking, Canny edges, region filtering and Hough line fitting.
- Shipped a **React frontend** displaying the raw and lane-marked videos side by side, unit-tested with pytest and Vitest.

Augmented Reality Sudoku Solver | *Python, OpenCV, TensorFlow, Keras, NumPy, pytest*

- Developed an AR Sudoku Solver enabling **real-time** overlay of solutions onto live video feeds of Sudoku boards.
- Extracted grids via **OpenCV** thresholding, contours, and homography, reading **81/81** cells correctly on real captures.
- Adapted a **CNN** pre-trained on the **Chars74K dataset** (**TensorFlow**) to live camera input via digit isolation.
- Cut inference latency **166x** (1.6s → 9.6ms) by batching 81 cells into a single **Keras** call instead of per-cell predictions.