Mandeep Singh

Brampton, ON | (647) 971-6235 | Mandeep.singh3030@gmail.com
www.linkedin.com/in/mandeepsingh3030 | https://mandeep3030.github.io/Mandeep3030/

Motivated Software Developer | Analytical • Adaptable • Collaborative

Bringing 7+ years of mechanical design experience with strong problem-solving and project management skills. Currently studying Software Engineering Technology - Artificial Intelligence at Centennial College, with hands-on projects in machine learning, NLP, and web development. Skilled in Python, SQL, and SDLC practices, blending engineering precision with software creativity to deliver innovative solutions.

CORE SKILLS:

- Programming Languages: Python, SQL, C#, Java, JavaScript, HTML/CSS
- AI/ML: Machine Learning, NLP, Model Training & Testing, AI Ethics
- Tools & Platforms: Git/GitHub, Jira, Power BI, Excel (Advanced), MERN stack
- Software Development: SDLC, Agile, Testing & QA, APIs, System Design
- Engineering Skills: NX Open (Java), CAD (NX, SolidWorks, AutoCAD), CNC Programming, Process Optimization

EDUCATION:

- Centennial College - Toronto, ON
  Software Engineering Technology: Artificial Intelligence (Co-op) 2023 - Present
  Relevant Courses: Machine Learning, Natural Language Processing, Database Concepts (SQL), Web Development, Java, C++ Programming, Testing & QA, Ethics of AI
- Sheridan College - Brampton, ON
  Diploma - Mechanical Engineering Technician: Design & Drafting 2015 - 2017
- Central Tool Room - Ludhiana, India
  Diploma - Mechanical Engineering: Tool & Die 2009 - 2013

RELEVANT PROJECTS:

- **NX Open - Java** Coding for Mold Plate Validation
  - Built a program using NX Open Java API to analyze mold plates design parameters.
  - Extracted and processed parametric data from solid bodies in nodes structure.
  - Applied algorithms to detect minimum distance errors & highlight problem areas.
- CNC **Post-Processor Development** (C++)
  - Built a C++ post-processor encoder-decoder to translate toolpaths into valid Fanuc G-code.
  - Applied logic-based algorithms to ensure accuracy and cross-machine compatibility.
- Automation with **Visual Studio Macros**
  - Created custom macros in Visual Studio for Office 365, Illustrator, and Corel.
  - Applied pattern recognition and scripting for task automation, saving hours of manual effort.
  - Built CNC macros enabling operators to execute complex operations with one click.

PROFESSIONAL EXPERIENCE:

- **Mold Designer** - StackTeck Systems Ltd. 3 Years
  - Designed and manufacture end to end injection mold development projects from concept to production, applying CAD, simulations, and design validations.
  - Collaborated with cross functional engineers ensuring on time deliverables.
    Automated design processes with NX Open (Java), reducing manual errors and improving efficiency.
- **Process Manager** - Top Quality Plastics Ltd. 5 Years
  - Managed injection molding projects, including architecture design & testing.
  - Implemented SQL, UNIX, and CAM-based tools to streamline production monitoring.
  - Supervised a team of 7 operators and 11 machines, ensuring 24/7 project delivery within strict deadlines.
- **Graduate Engineer Trainee** - Central Tool Room 2 Years
  - Trained engineers in CAD tools (SolidWorks, AutoCAD, NX), preparing them for high-precision design projects. Simulation & modeling.
  - Conducted stress and flow analysis, linking mechanical principles.

COMMUNITY ENGAGEMENT & LEADERSHIP:

Vibe Coding with Gemini CLI (2025): Participated in a hands-on coding event exploring Google's Gemini CLI for AI prototyping; experimented with prompt engineering, model integration, and command-line workflows.

Google AI Seminar (2024): Learned about responsible AI, ML model deployment, and generative AI.

Mentorship & Teaching - Taught CAD/Mechanical Design software to over 2,500 hours of students, strengthening technical communication and leadership.