Suhani Surya

Waterloo, ON | Open to relocation
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EDUCATION

University of Waterloo   Sept 2024 – May 2029
Candidate for Systems Design Engineering (Co-op) - BASc   *Waterloo, ON*

TECHNICAL SKILLS & INTERESTS

Programming Languages: Java, Python, JavaScript, HTML, CSS, C++
Digital Tools: G-Suite, Office 365, PowerPoint, Excel, Notion, Asana, Jira, Excel VBA/Macros, MatLab, ProjectWise
Hardware Skills: Circuitry, Micro controller Programming (Raspberry Pi), Soldering, Sensor integration
Libraries and Frameworks: React, Next.js, Flask
Design Skills: AutoCAD, Solidworks, Blender, Figma, Canva
Interests and Hobbies: Photography, Pilates, Programming, Vintage Shopping, Badminton, Tennis, Traveling

EXPERIENCE

Rail Systems Intern   Jan 2025 - Apr 2025
Hatch   *Mississauga, ON*
- Built a **TrainOps algorithm** in C++ to simulate train movement and detect collisions using OOP, arrays, and control flow structures.
- Reviewed and updated **CAD signalling and as-built drawings** for subdivision layouts; worked with electrical engineers to **ensure utility standard compliance**.
- Deployed a virtual lab in **EVE-NG** to simulate **VoIP and IoT** integration, supporting cybersecurity planning and proactive risk mitigation.
- Created **Excel VBA** and **Python-based** organizational tools and led onboarding documentation for **6 co-ops**, boosting information accessibility and streamlining coordination across a **30+** member engineering team.

Software Developer   Sept 2023 – Jan 2024
First Robotics - Team 3161   *Oakville, ON*
- Implemented proportional–integral–derivative (PID) to improve control and mobility in the robot's arm by **15%**.
- Developed **several Java-based processes** for efficient robot movement while leveraging key coding concepts like **OOP**.
- Created detailed documentation and reports for **2 software modules**, facilitating future maintenance.

Social Media and Marketing Intern   Feb 2024 – Present
The Food Society Canada   *Toronto, ON*
- Helped grow The Food Society Canada's social media audience by **2,000** people.
- Tracked and analyzed key performance indicators (KPIs) such as engagement rate, follower growth, and reach to evaluate the effectiveness of social media campaigns.
- Utilized KPI data to refine content strategy, leading to a **12% increase** in average post engagement over two months.

PROJECTS

Breast Cancer Diagnosis – Object Detection Model   Oct 2023 – Jan 2024
Roboflow
- Developed an **AI-powered object detection model** for early breast cancer diagnosis using annotated mammogram images and Roboflow 3.0.
- Achieved **99.5% mAP, 100% precision, and 100% recall** across a dataset of **1,220** medical images.
- Curated, annotated, and preprocessed a high-quality dataset to ensure reliable training and validation outcomes.
- Authored a Medium article explaining the **model development pipeline**, preprocessing steps, and clinical relevance of AI in breast cancer detection.   Model | Article

Extract.IO   Mar 2024 – Jun 2024
*Personal Project | **Tech Stack: Python, Pytesseract, Flask, HTML/CSS***
- Built a web tool allowing users to upload documents and extract text via Python's **Pytesseract OCR**, reducing manual data entry by over **30 hours/month**.
- Designed and deployed a user-friendly front-end using HTML/CSS, leading to a **25% increase** in engagement over three months.   GitHub Repo