

# Manav Pandya

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## TECHNICAL SKILLS

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**Languages:** C, Python, Java, SQL, HTML, CSS, JavaScript, TypeScript, C#

**Frameworks:** React.js, Node.js, Next.js, ASP.NET, Tailwind

**Developer Tools:** Git, Amazon Web Services, Visual Studio Code, Netlify, Microsoft Office, Visual Studio

**Libraries:** NumPy, Matplotlib, OpenCV, pandas

## WORK EXPERIENCE

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### Research Assistant

Jun. 2024 — Aug. 2024

*The University of Guelph*

*Guelph, ON*

- Developed a Python-based image analysis tool to process vibration and displacement data for nuclear steam generator tube arrays, optimizing accuracy and efficiency
- Migrated and improved a legacy Matlab codebase, leveraging OpenCV, NumPy, and Matplotlib libraries to enhance data processing and visualization
- Collaborated with research teams to validate data analysis outcomes, ensuring reliable results for use in nuclear power system simulations

### Software Developer Intern

Jan. 2024 – Apr. 2024

*The Descartes Systems Group Inc*

*Waterloo, ON*

- Developed a secure web app using ASP.NET Core, JavaScript, and SQL Server, enabling admin-level CRUD operations to centralize API documentation, streamlining access and interaction for users across the company
- Adapted quickly to changing requirements, optimizing performance and enhancing UI/UX by transitioning from React to ASP.NET and improving database interactions using C# and ASP.NET Core
- Led database interaction optimization efforts, reducing query time and improving data retrieval efficiency for key application components

### Cloud Engineer Co-op

Sep. 2022 – Dec. 2022

*Sun Life Financial*

*Waterloo, ON*

- Automated and supported cloud infrastructure tasks by creating AWS S3 buckets, SQS queues, and managing IAM permissions using CloudFormation templates
- Developed Python scripts using Boto3 to analyze AWS API call activity, optimizing CloudTrail log data retrieval through Athena queries
- Contributed to establishing cloud infrastructure standards and best practices, improving the reliability and scalability of AWS cloud solutions

### Application Developer Co-op

May 2022 – Aug. 2022

*CIBC*

*Toronto, ON*

- Developed a user interface in HTML and JavaScript for QA and business teams to validate workflows, improving the efficiency of document review and management
- Collaborated with a team of professionals to develop and implement improvements in PEGA, streamlining document generation, remote signing, and secure storage processes
- Applied Agile methodologies and test-driven development (TDD) to develop APIs and ensure seamless application functionality using Postman for testing

## PROJECTS

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### Image Processing Toolbox | *Python, PIL, Matplotlib*

- Created a Python library which allows users to apply filters, transformations, and enhancements to images through an intuitive graphical user interface
- Included a comprehensive collection of image processing functions such as cropping, scaling, and filtering
- Implemented a user-friendly interface for easy image manipulation and analysis using Tkinter

### Mars Rover Photo Viewer | *HTML, CSS, JavaScript (React), Git*

- Developed a web application that utilizes the NASA Mars Rover Photo API to retrieve and display photos captured by the Mars rovers

## EDUCATION

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### University of Guelph

Guelph, ON

*Bachelor of Computing, Software Engineering Co-op*

*Sep. 2020 – Apr. 2025*

- Current Cumulative GPA: 3.77/4.0 (87.2%) — Dean's Honour List for all semesters
- Relevant Coursework: Data Structures, Algorithms, Object Oriented Programming, Software Design, Databases