Claire Villanueva

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EDUCATION

Bachelor of Software Engineering, Co-op Option **September 2021-Present**
Carleton University, Ottawa, ON

- Third year standing, CGPA: 10.35/12 (A)
- Henry Marshall Tory Scholarship
- Golden Key International Honour Society
- Expected Graduation Date: April 2026

AVAILABILITY

Available for 12 months beginning January 2024

RELEVANT SKILLS, EXPERIENCES AND ACCOMPLISHMENTS

Technical Skills

- Programmed using C language to handle **memory pointers** to learn and perform data structure approaches such as FIFO (queues), LIFO (stacks), and linked lists
- Wrote a dataset analyzer program using Python to organize **CSV files** into readable outputs using sorting algorithms and retrieved specific data using functions containing tuples and sets
- Created GUIs in Python using **Tkinter** and **Matplotlib** to display data plots according to user input by pulling data from Excel sheets using **Pandas** and the built-in CSV module in Python
- Programmed using HTML, CSS, and JavaScript with the knowledge of **CSS containers** as well as HTML id and class attributes to design a website that calculates final grades
- Demonstrated analytical skills by developing **unit test cases** in Java and Python to ensure the functionality of each program performs to its optimal potential
- Used various **IDEs** and coding tools such as Git, GitHub, Eclipse, VSCode, Wing101, IntelliJ and Pelles C to create several programs

Communication Skills

- Clearly presented an engineering design process that included project economics and conceptual design by writing a formal report and creating a video presentation to a non-technical audience
- Collaborated with four team members to design trusses which will support the roof of a hockey arena using forces calculations and engineering drawings of the internal forces on the truss
- Fluent in English: oral, written, reading
- Beginner in French: oral, written, reading

WORK EXPERIENCE

Junior Software Development Engineer Intern **May 2023-August 2023**
Ciena, Kanata, Ontario

- Create programs that extracts data from Excel sheets and graphically displays the information onto a GUI using Python and Matplotlib
- Participate in a first-hand customer event called Ciena Vectors by deploying one of my programs that displays frequency graphs pulled real-time from Ciena's labs in front of customers

- Learn and code in a brand-new programming language, Cadence SKILL, to modify coworker's existing code to add more functionalities in a hardware environment, TigerVNC

Front Desk Agent **April 2022-April 2023**

Wingate by Wyndham Hotel, Kanata, Ontario

- Use hotel software, SynXis, to check in/check out guests and create reservations
- Work independently in a fast-paced environment and multitask efficiently when handling guests at the front desk as well as over the phone
- Protect clients by enforcing strict precautions when others ask for confidential information about guests such as room numbers, address, and room key distribution

APPLIED PROJECTS

Junior Software Engineer Intern **June 2023-July 2023**

Real-Time Data Extract

- Collaborated with a hardware engineer as she operated lab hardware to send real-time data to my virtual computer which allowed me to obtain and manipulate constant new data
- Used Python Tkinter and Matplotlib to frequently update a sine wave graph after every 256 data point iterations and created menu buttons such as pausing and terminating the data pull
- Individually performed intricate planning and code tracing to ensure that new data is constantly and accurately used

Junior Software Engineer Intern **May 2023-July 2023**

Mapping Wafers GUI

- Extracted and organized large amounts of data from Excel sheets according to what the manager desired using Python Pandas and Python's CSV module
- Created a map of wafers by plotting the data and its corresponding coordinates found in the Excel sheet as well as plotted histograms based on data from another Excel sheet using Tkinter and Matplotlib
- Programmed a scrollable frame widget that allowed the user to have an easy method to select which parameter (inductance, power, current, etc.) they would like to be plotted and displayed using Tkinter GUIs

Team Leader **September 2021-December 2021**

Tool Design Project

- Reverse engineered a Keurig using Autodesk Fusion 360 and hand sketched drawings that featured different aspects such as component, assembly, and isometric views
- Utilized written communication skills to formulate a final report which consisted of all drawing, photo, and virtual deliverables of the project tool as well as explanations of the design scope
- Allocated equal and fair roles for the team to complete tasks and deliverables according to schedule by formulating deadlines and incorporating each member's judgement

RECORD OF GRADES

Claire Villanueva

Bachelor of Software Engineering, Second Year Standing
Carleton University

Cumulative Grade Point Average: 10.35/12 (A)
Number of Academic (4 month) Terms Completed: 4
Co-op (4 Month) Work Terms Completed: 1
Graduation Date: April 2026

Course Number	Course Name	Letter Grade
Year One:		
BIOL 1902	Natural History	A+
CHEM 1011	Chemistry for Engineering Students	A+
ECOR 1045	Statics	SAT
ECOR 1046	Mechanics	A+
ECOR 1047	Visual Communication	SAT
ECOR 1048	Dynamics	A
ECOR 1055	Introduction to Engineering Disciplines I	SAT
ECOR 1057	Engineering Profession	SAT
MATH 1004	Calculus for Engineering or Physics	A
ECOR 1041	Computation and Programming	A-
ECOR 1042	Data Management	A+
ECOR 1043	Circuits	A-
ECOR 1044	Mechatronics	B+
ECOR 1056	Introduction to Engineering Disciplines II	SAT
HIST 2707	Modern Africa	A
MATH 1104	Linear Algebra for Engineering or Science	A+
PHYS 1004	Introductory Electromagnetism and Wave Motion	A-
Year Two:		
SYSC 2310	Introduction to Digital Systems	A
COMP 1805	Discrete Structures	A+
SYSC 2006	Foundations of Imperative Programming	C
ELEC 2501	Circuits and Signals	C+
MATH 1005	Differential Equations and Infinite Series for Engineering or Physics	B+
COOP 1000	Co-Op	SAT
CCDP 2100	Communication Skills for Engineering Students	A
SYSC 2004	Object-Oriented Software Development	SAT
SYSC 2320	Introduction to Computer Organization and Architecture	A-
COMP 2804	Discrete Structures II	SAT
SYSC 2100	Algorithms and Data Structures	SAT
Year Three:		

NEUR 1202	Neuroscience of Mental Health and Psychiatric Disease	A+
SYSC 3310	Introduction to Real-Time Systems	In Progress
SYSC 3110	Software Development Project	In Progress
SYSC 3120	Software Requirements Engineering	In Progress
SYSC 4001	Operating Systems	In Progress
ECOR 2050	Design and Analysis of Engineering Experiments	In Progress