

# About the Job

## Job Description

Do you have a passion for video processing and the desire to change the world? Come and join us. Intel is seeking highly qualified candidates to join our Data Platforms Group, (DPG) as a Software Video Compression Product Engineer Intern. Join the DPG Video Infrastructure Division at the Marine Gateway site in beautiful Vancouver British Columbia. Our team is leading the innovation of SW video compression algorithms at Intel, targeting Intel Xeon CPUs and Data Center platforms. As a member of our team, you will get to take part in producing cutting edge next generation video compression technologies, advancing Scalable Video Technology, (SVT) and help some of the world's leading communication and cloud service providers scale media services with the latest and greatest Intel products. Scalable Video Technology (SVT) is Intel's video compression architecture successfully released into multiple CODEC standard implementations, which provides market leading optimizations on Intel processors designed to scale from edge to cloud.

The Data Platforms Group (DPG) drives new products and technologies from high-end coprocessors for supercomputers to low-energy systems, for enterprise and the cloud as well as solutions for big data and intelligent devices. The group is a worldwide organization that develops the products and technologies that power 9 out of every 10 servers sold worldwide.

Your responsibilities would include, but not be limited to the following:

- Automate and maintain scripts for product-based transcoding workflows and pipelines.
- Maintain open-source products in an agile development process.
- Develop new video coding features and algorithms.
- Implement new features at the video application API level.
- Debug and fix bugs across the SVT Open-Source encoder implementations.
- Script and automate custom scripts for testing and evaluating different video compression products.
- Work with frame works such as FFmpeg and GStreamer.
- Benchmark and validate the performance of multiple products on several platforms.
- Set up debug systems and or performance systems according to precise HW specifications.
- Optimizations for component and system performance quality and ease of use.

## The Ideal Candidate Should Exhibit The Following Behavioral Traits

- High motivated individual willing to work under pressure and deliver high quality results on time.
- Excellent written and verbal communication skills.
- Strong quantitative analytical problem solving and conflict resolution skills.
- Effective prioritization and time management skills.

- Stakeholder management strong collaboration tolerance for ambiguity and critical thinking.
- Excellent teamwork ethics skills willing to work in an agile work environment.

Length of internship: 8 Months

This is an entry level position and it will be compensated accordingly.

### **Qualifications**

You must possess the below minimum qualifications to be initially considered for this position. Preferred qualifications are in addition to the minimum requirements and are considered a plus factor in identifying top candidates. Experience listed below would be obtained through a combination of your schoolwork/classes/research and/or relevant previous job and/or internship experiences.

### **Minimum Qualifications**

Candidate must be pursuing a Bachelor's degree in Computer Engineering Electrical Engineering Computer Science or related disciplines.

3+ months of experience in some of the following areas:

- CC programming language.
- Python
- Control tools svn git.
- Command line applications in both Windows and Linux.
- Batch and Bash commands.

### **Preferred Qualifications**

3+ months of experience in some of the following areas:

- Continuous integration frame works such as Jenkins Travis GitHub actions.
- FFmpeg and video rendering software solutions.
- Video compression processing workflows.
- Cloud native orchestration container virtualization edge computing and networking technologies.
- Data Analytics and Marketing

### **Inside this Business Group**

The Network & Edge Group brings together our network connectivity and edge into a business unit chartered to drive technology end to end product leadership. It's leadership Ethernet,

Switch, IPU, Photonics, Network and Edge portfolio is comprised of leadership products critically important to our customers.

### **Other Locations**

Virtual Canada

### **Work Model for this Role**

This role will be eligible for our hybrid work model which allows employees to split their time between working on-site at their assigned Intel site and off-site.

Intel is committed to a culture of accessibility. Intel provides accommodations to applicants and employees with disabilities. Find information and request accommodation here

## **Citation**

“Software Video Compression Product Engineer Undergraduate Internship.” *LinkedIn*,

<https://www.linkedin.com/jobs/view/software-video-compression-product-engineer-undergraduate-internship-at-intel-corporation-3112105882/?originalSubdomain=ca>. Accessed 6 08 2022.

# Nichole White

3451 Sawmill Cr, Vancouver, BC V5S 0H1; nichwhi@gmail.com; 778.980.5691

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August 8th, 2022

Hiring Manager  
Intel Corporation  
450 SW Marine Drive Suite 700  
Vancouver, BC, Canada  
V6B 2E6

RE: Software Video Compression Product Engineer Intern

Dear Hiring Manager,

I was delighted to read about the Software Engineering Internship that Intel Corporation is offering from the LinkedIn job postings. As a current Computer Science student at the University of British Columbia, I would be thrilled to contribute to Intel's mission to create cutting edge video compression products. I am confident that with my knowledge of essential data structures and algorithms, I will make a valuable addition to the Data Platforms Group.

In my previous Co-op at Ballard Power Systems, I automated data processing by developing Python programs using Pandas and Tkinter. As this processed data had to be manually inserted into Excel sheets, I taught myself VBA to automate this process. On each project at Ballard, I worked closely with the members of my team to tailor the program to their specifications. This experience furthered my skills with version control, debugging, problem-solving, and teamwork.

Through my studies at UBC and UVic, I have gained the skills to learn quickly and excel in high pressure situations. After completing various projects, I have become experienced with the fundamental programming languages including C/C++, Python, and Java; this work has advanced my skills with object-oriented programming, test-driven development, and core programming concepts.

As a motivated and hard-working employee, I am optimistic that I am an excellent fit for the Intel team. Thank you for your time and consideration of my application. I look forward to discussing this opportunity at your earliest convenience.

Sincerely,

*Nichole White*

Nichole White

Enclosure: Resume

# Nichole White

3451 Sawmill Cr, Vancouver, BC V5S 0H1; nichwhi@gmail.com; 778.980.5691

## OBJECTIVE

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Software engineering for an innovative technology company, leading to position advancement.

## TECHNICAL SKILLS

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**Languages:** Python, Java, C/C++, Assembly, R, VBA, PHP, SQL, HTML, CSS

**Libraries and Tools:** Pandas, Swing, Tidyverse, NumPy, Tkinter, Oracle

## WORK EXPERIENCE

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**Membrane Research Scientist (Co-op | Intern), Ballard Power Systems Inc.** Sep 2020- Sep 2021

- Extensive fuel cell assembly and testing for PEM optimization
- Designed various Python programs using Pandas library and developed VBA macros to automate and increase data processing efficiency, based on requests from team members
- Established techniques to improve fuel cell stack disassembly for undamaged MEA retrieval
- Trained new employees on constructing MEA's and fuel cell test station operation.

**Field Technician (Co-op | Intern), E.S. Cropconsult** 2018, 2019, 2020

- Made recommendations and efficacy assessments of chemical treatments; collaborated with supervisors and colleagues to establish daily duties; organized an archive of past assessments

**Analyst (Part-time), Klean Industries** 2019, 2020

- Sample collection and analysis of pyrolysis data; periodic written reports to highlight findings

## TECHNICAL PROJECTS

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**Image Manipulator (Academic) - C++, Algorithms, Data Structures** Spring 2022

- Uses a doubly linked list to represent image pixels; carves the image to reduce memory used
- Key strategies & tools: TDD, Debugging with VSCode, OOP, XFPT and XShell, BFS, DFS

**Expense Tracker Desktop Application (Academic) - Java, JSON, JUnit** Fall 2021

- Users can track their monthly spending habits; features include: adding entries, loading and saving data, viewing their history, and clearing the entry log
- Tools: TDD, JUnit testing, IntelliJ for debugging, OOP, UML diagram, GitHub, Java Swing

## COMMUNITY INVOLVEMENT

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**Renal Unit and Patient Placement Volunteer, Royal Jubilee Hospital** 2017- 2020

**Support and Distribution Volunteer, Sources Food Bank** 2017- 2020

**Disaster Support Volunteer, Emergency Social Services** 2017

**Ambassador, White Rock Youth Ambassador Program** 2014-2015

## EDUCATION

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**Bachelor of Computer Science, University of British Columbia** 2021- Present

**BSc (Chemistry for the Medical Sciences), University of Victoria** 2015-2021

## REFERENCES

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Available upon request

Nichole White  
3451 Sawmill Cr,  
Vancouver, BC V5S 0H1

August 8, 2022

David Narod  
1627 128th St  
Surrey, BC V4A 3V2

Subject: Reference Letter Request

Dear David,

I hope this letter finds you well. I am reaching out to you because I have applied to a Software Engineering role at Intel, and I would greatly appreciate a reference letter from you.

As the owner of Piquant, I believe you are the perfect person to vouch for my hard-working and enthusiastic work ethic. Working under your leadership, I have developed excellent interpersonal, problem-solving, and communication skills. My experience at Piquant is invaluable, and the skills I have gained directly relate to the position at Intel.

I have enclosed a copy of the job posting and my updated resume. Thank you very much for considering my request, and please contact me at [nichwhi@gmail.com](mailto:nichwhi@gmail.com) if you have any questions or require further information. I look forward to hearing from you.

Sincerely,

*Nichole White*

Nichole White

Enclosure:  
Resume  
Job Posting

Nichole White  
3451 Sawmill Cr,  
Vancouver, BC V5S 0H1

August 8, 2022

Ales Horky  
9000 Glenlyon Pkwy,  
Burnaby, BC V5J 5J8

Subject: Reference Letter Request

Dear Ales,

I hope this letter finds you well. I am reaching out to you because I have applied to a Software Engineering role at Intel, and I would greatly appreciate a reference letter from you.

As the senior engineer at Ballard, I believe you are the perfect person to vouch for my enthusiastic work ethic and programming experience. Working under your leadership, I have developed excellent time management, problem-solving, and organizational skills. Further, my work developing the Python programs directly relate to the position at Intel. My experience at Ballard is invaluable, and I believe these skills will allow me to excel at Intel.

I have enclosed a copy of the job posting and my updated resume. Thank you very much for considering my request, and please contact me at [nichwhi@gmail.com](mailto:nichwhi@gmail.com) if you have any questions or require further information. I look forward to hearing from you.

Sincerely,

*Nichole White*

Nichole White

Enclosure:  
Resume  
Job Posting

Nichole White  
3451 Sawmill Cr,  
Vancouver, BC V5S 0H1

August 8, 2022

Heidi Lundstrum  
6145 171a St,  
Surrey, BC V3S 5S1

Subject: Reference Letter Request

Dear Heidi,

I hope this letter finds you well. I am reaching out to you because I have applied to a Software Engineering role at Intel, and I would greatly appreciate a reference letter from you.

As my manager for three seasons, I believe you are the perfect person to vouch for my enthusiastic work ethic and attention to detail. Working under your leadership, I have developed excellent time management, teamwork, and leadership skills. My experience at E.S Cropconsult is invaluable, and the skills I have gained directly relate to the position at Intel.

I have enclosed a copy of the job posting and my updated resume. Thank you very much for considering my request, and please contact me at [nichwhi@gmail.com](mailto:nichwhi@gmail.com) if you have any questions or require further information. I look forward to hearing from you.

Sincerely,

*Nichole White*

Nichole White

Enclosure:  
Resume  
Job Posting