

Algorithm Specialist for Improving Operations

About Us

Located in the beautiful Niagara Region, Book Depot Inc. is an innovative leader in the bargain book industry, and we have been for more than 30 years. Today, our massive 500,000 square foot distribution facility pushes the limits of technology to fulfill orders all over the world.

At Book Depot Inc. we believe that reading is at the heart of enchanting the mind, and it is our shared responsibility to bring this purpose to life – one book at a time. Our culture and everything that we do is guided by our core values. To learn more about Book Depot Inc., please visit our website at: <https://www.bookdepot.ca/Help/AboutUs>

Our Opportunity

We have an opportunity available for a **4-month co-op/work-placement term** for an **Operations Algorithm Specialist** based out of our main facility in Thorold, Ontario. The term would run from January to April 2021, with the possibility of an extension into July 2021.

Position's Core Focus

Reporting to the IT Director, and working closely with the VP of Operations, the Operations Algorithm Specialist will work with a progressive and dynamic group of stakeholders to improve various algorithms related to our automation to achieve optimal performance under varying inputs and outputs.

Book Depot has invested heavily in automation technologies in a push to become a lean, efficient organization. Book Depot is currently working on its largest automation investment ever, which is expected to be fully operational by the end of June 2021. We use automation to sort for both inbound and outbound activities. Our products, which mainly consist of books, come in large randomized pallets, some with manifests, and others without. We have to efficiently sort these down to individual titles which then move onto the main conveyor and may end up in a buffer system prior to being routed to the zone where inventory is stored on a shelf. Outbound sorting is required when orders of various sizes are placed, and the items are picked to totes, may be sent into a buffer until required, and then make their way to the outbound sortation machine, where the titles are sorted into individual orders. Totes are then routed to automated order packing equipment.

As we continue to experience rapid growth for our products, we need to maximize our limited resources through improved efficiencies by embracing a scientific approach to analyze our sortation and product flow processes to find efficiencies.

The ideal candidate will be self-motivated with superior attention to detail. This position will suit someone who enjoys working on real-world, complex problems, improving algorithms, analyzing big data sets, and thinking out of the box to create efficient systems that aid throughput and efficiency.

November 16, 2020

You will be working closely with the software developers who will implement the algorithm in production.

Other key responsibilities include:

- Understanding and analyzing our processes, specifically the Sortation Algorithm and how product flows downstream through the rest of the operation
- Utilizing tools such as R, Python, Pandas or equivalent to scientifically and mathematically analyze historical big data sets
- Developing pseudocode for algorithm improvements
- Modeling simulations to trial the algorithms
- Documenting system improvements
- Applying AI technologies to hone the algorithm
- Understanding and applying Queueing Theory to help build efficient and cost-effective workflow systems

Qualifications, skills and abilities include:

- Bachelor's degree in Mathematics, Computer Science, or equivalent
- Experience and love of developing algorithms to solve complex problems and improve efficiencies
- Statistical analytical skills are preferred
- Intermediate knowledge of SQL, with the ability to write intermediate queries to include use of sub-queries; perform basic query optimization, indexing, and pivoting
- Positive attitude
- Comfort working in a fast-paced environment with minimal supervision
- Self-starter with an inquisitive mindset
- Ability to listen and contribute to multiple ideas
- Willing to do production deployments during non-production hours

If interested in this position, please send a resume and cover letter to jobs@bookdepot.com indicating "Operations Algorithm Specialist" in the subject line

We very much appreciate and thank you for your application and interest in this position, however, only those individuals selected to participate in our interview process will be contacted. We will keep all resumes received for one year.

Book Depot Inc. is an equal opportunity employer and is committed to a diverse and inclusive workplace for all. If you are contacted for a job opportunity, please advise us of any accommodations necessary.