

Frank Basham

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Security Clearance: **Secret (Level II)**

Department: **Fisheries and Oceans Canada**

Tenure: **Indeterminate**

Substantive: **GT-04**

Specifics

Languages: **C#, Java, Python, JavaScript, PHP, SQL**

Frameworks: **React, Angular, Vue, Django, Flask, Spring Boot, .NET**

Databases: **PostgreSQL, MongoDB, MySQL, SQLite**

Software: **IBM Maximo, SAP, DRMIS, Power BI, Tableau, Drupal**

Interests: **Application development, software engineering, programming**

Strengths: **Desire to learn, autonomy, problem solving, analysis, creativity**

Projects

Web Applications: <https://gcjobs.herokuapp.com> , <https://engexam.herokuapp.com>

GitHub: <https://github.com/Fbasham>

Programming Challenges: <https://www.codewars.com/users/Fbasham>

Education

1. **University of Waterloo; BAsC. Chemical Engineering**
2. **Algonquin College; Computer Programming (2023 anticipated)**

Work History

Title: **Asset Management Systems Officer (GT-04)**

Company Name: **Fisheries and Oceans Canada**

Dates Employed: **October 2019 – Present, April 2020 – August 2020 (GT-05 acting)**

- **Optimize and improve current standard operating procedures and departmental workflows by integrating Python, JavaScript, SQL, Excel, Power BI, Tableau, and Maximo to support business intelligence, analytics, and automation**
- **Create ad hoc reports and SQL queries to pull data from the Oracle database for clients**
- **Provide helpdesk assistance to clients in the Central region for issues related to IBM Maximo; including network issues, and database administration issues**
- **Perform database administration for IBM Maximo in the Central region (account creation, maintenance of security groups/profiles, development of automation scripts)**
- **Install asset management software (DMSI MAINTelligence) onboard vessels**
- **Deliver asset management training to Canadian Coast Guard Personnel in the use of IBM Maximo**
- **Lead workshops, design course material, design lesson plans, and develop curriculums, and maintain curriculums pertaining to the Canadian Coast Guard's Asset Management Systems**

Title: Logistics Analyst

Company Name: NGL Supply Co. Ltd.

Dates Employed: December 2018 – October 2019

- Developed an inventory management web application that was used to enhance data integrity, transparency, and version control by replacing Excel spreadsheets. This project was created using React JS/HTML/CSS for the frontend UI, and a Python backend using the Django framework to connect to a PostgreSQL database. It implemented the CRUD methodology for persistent storage and required authentication for making any changes to the inventory which was managed via Django. This web application was hosted on a Linux server and accessible through the company's intranet
- Developed over 10 ETL (Extract, Transform, Load) programs to automate an existing invoicing process. These programs used Python to make asynchronous HTTP requests to client servers to fetch PDF invoices. The PDFs were then parsed using Python with an OCR (Optical Character Recognition) library. The parsed data was converted to tabular data where transformation by grouping and aggregated functions were applied using Pandas, a Python library for data science. Finally the reduced data was converted to CSV format and loaded into the company ERP using Java to connect and upload the file to the database. These programs saved a total of 40 hours per week
- Coded a Python script that uses Google OR-Tools, Pandas, and the Python standard library to minimize total freight cost while maximizing product flow in the company's supply network. The output of this script yielded optimized routes for shipping product from supply nodes to demand nodes, saving the company ~\$2M/month
- Created ad hoc reports and data analysis workflows for clients using Python, SQL, Power BI, and Tableau
- Performed support technician duties by installing software for clients, troubleshooting desktop/network equipment, and administering internal SharePoint sites
- I self-started an initiative to teach programming to peers on a monthly basis during lunchtime. I taught JavaScript and Python and covered the basics of installation, setting up an IDE or text editor, various programming paradigms like objected oriented, functional, and procedural, as well as how to leverage standard library packages and 3rd party open sources

Title: Marine Systems Engineering Officer

Company Name: Canadian Armed Forces

Dates Employed: May 2016 - November 2018

- Responsible for the readiness, operation, maintenance, and project management of propulsion and ancillary systems, power generation and distribution, auxiliary systems, ship's service systems, and machinery control systems
- Managed a department of 15 marine engineers and electricians during day-to-day operations on board a Halifax Class Frigate and at shore-based facilities
- Responsible for lifecycle materiel management of assets under my purview. I generated planned and unplanned maintenance work orders via DRMIS (SAP based CMMS). I assigned work to my team of marine engineers/electricians, followed up on completion, and managed work budgets
- Designed, implemented, and administered a web application using a Python and MySQL database backend with JavaScript/HTML/CSS frontend to track and report status of training of marine engineers, reducing manual calculations/tedious data entry by over 20 hours per week
- Was a member of the project team responsible for the acquisition of marine engineering assets

Title: Process Engineer & Laboratory Research Technician

Company Name: Woodbridge Foam Group

Dates Employed: January 2011 - May 2016

- Developed a single page web application using Node JS, Express, HTML, CSS, and JavaScript to display process data (number of defects per hour, temperatures, hours of downtime, etc.) on the plant floor via large screen displays connected to Raspberry Pis. This application was hosted on a Linux server
- Wrote numerous Python scripts for data analysis using telemetry data collected from sensors throughout the plant. I analyzed this data and made recommendations to senior management when there were observed perturbations
- Self-started chemical formulation changes in a variety of products by incrementally varying composition of resin batches leading to raw material cost savings of \$3,000 per month
- Designed, conducted, and analyzed results of a randomized block statistical experiment that lead to changes in the standard operating procedure of part production, reducing number of defective parts by 30% per day
- Planned and executed process improvement initiatives using statistical process control, quality assurance monitoring, Lean/Sig Sigma techniques, equipment selection, and optimization configurations to limit plant upsets and reduce the number of defective parts per hour
- Responsible for the project management of engineering equipment on the production line. This included design, acquisition, commissioning, operations and maintenance, and divestment
- Responsible for lifecycle materiel management of engineering equipment on the production line