

# Damian D'monte

506-897-2169 | [damiandmonte@gmail.com](mailto:damiandmonte@gmail.com) | [linkedin.com/in/ddmonte](https://www.linkedin.com/in/ddmonte) | [github.com/damiandmonte](https://github.com/damiandmonte)

## EDUCATION

### University of New Brunswick

*Master of Computer Science*

Fredericton, NB

Sep. 2019 – Aug 2021

### Fr. Conceicao Rodrigues College of Engineering, Univeristy of Mumbai

*Bachelor of Engineering (Computer Engineering)*

Mumbai, MH

Jul. 2013 – May 2016

## TECHNICAL SKILLS

**Languages** — C/C++, Pro\*C, Java, Racket, Python, R, L<sup>A</sup>T<sub>E</sub>X, WebAssembly, JavaScript, HTML/CSS, SQL

**Developer Tools** — Git, Docker, GitLab CI/CD, VSCode, CMake, GDB, Valgrind, Perf, Putty, Eclipse, PL/SQL Developer, R Studio

**Methodologies** — OOPS, UML, SDLC - Incremental Model, Agile Model - SCRUM and Extreme Programming.

## EXPERIENCE

### Graduate Research Assistant

Sep 2019 – Present

*UNB/IBM Center of Advance Studies — Atlantic | Project — OMR in Resource Constrained Env.*

*Fredericton, NB*

Technology Stack — C++, Gitlab CI/CD, VSCode, Docker, GDB, Linux

- Researched into shared cache and ELF-based compiled code storage mechanisms for Eclipse OMR compiler technology
- Contributed to open source Eclipse OMR code base.
- Developed an ELF-based shared object generator in C++ for storing WebAssembly ahead-of-time compiled code.

### Software Developer

Jan. 2017 – Aug. 2019

*Tata Consultancy Servies Limited | Project — TCS BaNCS Securites Trading - Front Office*

*Mumbai, MH*

Technology Stack — Pro\*C, C++, Putty, SVN, GDB, Linux, Bash Scripting, PL/SQL Dev., SCRUM

- Developed enhancements and resolved multiple defects/bugs impacting over a million customers for premier institutional and retail clients: **BNP Paribas, Investec, Nomura, HSBC, HDFC Securities & Axis Securities**
- Successfully deployed TCS BaNCS Securities Trading (FNO) on UAT/SIT/Production application server's at BNP Paribas, supported UAT/Fidessa testing, provided immediate fixes, and transitioned the product to LIVE
- Implemented bash scripts to automate application startup, sanity checks, logs backup, market open and close, etc.
- Worked with cross-functional teams to ensure fulfillment of product requirements, evaluated product performance and transitioned patches from development to commercialization.
- Acted as a customer liaison on technical issues related to product integration and deployment
- Provided production support (onsite/off-site) to institutional and retail trading desks during critical market hours.

## ACADEMIC PROJECTS

### Mark & Sweep Garbage Collector | C++, Git, Cmake

Aug 2019 – Dec 2019

- Implemented a heap management system to simulate object allocation via input trace files
- Developed Mark and Sweep garbage collector prototype to perform mark/sweep operations on heap objects
- Detected and deleted 99% of dead objects and displayed CLI statistics post garbage collection

### NominalGDP Predictor | R, ggplot, Tidyverse, Git

June 2020 – Present

- Assembled a dataset of major economic indicators from multiple online and official sources.
- Performed exploratory data analysis on the dataset and trained it using linear regression and random forest model.
- Predicted the Nominal GDP (of Canada) for the years 2018, 2019 and 2020 with 95%+ accuracy.

### DaskDB Cost Based Optimizer | Python, Pandas, DaskDB

Jan 2020 – Apr 2020

- Researched into cost based optimizers and created a prototype for a DaskDB data science system
- Developed a statsGather utility using Python and Pandas to gather different types of database statistics
- Implemented the functionality to generate physical plans from a logical plan and calculated the cost of each plan.

### Malware Detector | Java, JSwing, Git

Aug 2015 – May 2016

- Performed binary analysis on PE-executables and applied a n-gram based approach to finalize a binary feature set.
- Applied SVM classification for modelling, which in turn detected all the malicious and benign exe's.
- Designed and developed a GUI using JApplets/JSwing to automate the training, validation and prediction.

## AWARDS & ACHIEVEMENTS

- Research fellowship grant of 22,500 CAD/yr by IBM CAS-Atlantic on the Eclipse OMR project, 2019-2021.
- Awarded "Star of the Month" twice for outstanding performance at TCS, Nov 2017 and Jan 2018.
- "Star Team Award" award at TCS for assuring a succesful direct connectivity GO-LIVE for all clients, Jun 2019.
- Elected as the Secretary of UNB Computer Science Graduate Students Association, Nov 2020 - present.

## PUBLICATIONS

An ELF-based storage option for the eclipse OMR ahead-of-time compiler, In Proceedings of the 30th Annual International Conference on Computer Science and Software Engineering (CASCON '20), ACM Digital Library, IBM Corp., USA, 173–178.