Damian D'monte

506-897-2169 | damiandmonte@gmail.com | linkedin.com/in/ddmonte | github.com/damiandmonte

EDUCATION

University of New Brunswick	Fredericton, NB
Master of Computer Science	*Sep. 2019 – Aug 2021*
Fr. Concceicao Rodrigues College of Engineering, Univeristy of Mumbai	Mumbai, MH
Bachelor of Engineering (Computer Engineering)	*Jul. 2013 – May 2016*

TECHNICAL SKILLS

Languages — C/C++, Pro*C, Java, Racket, Python, R, LaTeX, 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 optimzers 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 calcuated 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 oustanding 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.