MOUSTAFA ELSISY

CONTACT & PORTFOLIO

moustafaelsisy.com
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(709)743-9750

EDUCATION

Memorial University of Newfoundland
Sep. 2016 - Dec. 2019
B.Sc. (Hons), Computer Science
GPA: 4.0
Cumulative Average: 96.5%

HIGHLIGHTS

AWS | Cloud Arch. | Data Science / ML | Big Data | IoT | Monorepo DevOps | TypeScript | Python | React

DISTINCTIONS

- MUN University Medal of Academic Excellence - Computer Science 2019
- 1st Place Hackathon Winner: HackFrost 3.0 (2023), Startup Weekend 2017, Hacking Health 2017
- Dean of Science Book Prize 2017-2018
- Faculty of Science Dean's List 2016, 2017, 2018

EXPERIENCE

Mysa — Aug. 2019 - Present (4yrs)
Software Architect - St. John's, NL, Canada

- Designed a novel approach for replicating, ETLing, cataloging and performing complex queries on Terabytes of DynamoDB data at almost no cost
- Automated and unified Mysa's manual cloud deployments, by developing a custom framework for orchestrating deployments across different microserviced cloud applications in tandem, using Lerna, PNPM, GitHub API and AWS CDK
- Developed an Express-inspired framework over AWS CDK that significantly streamlines the complexity of developing serverless API endpoints on multiple units of infrastructure
- Devised an approach to achieve 100% monitoring coverage of 1000s of lambda functions within days, at near-zero cost
- Invented an industry leading droop correction algorithm for Mysa's thermostats, that makes it one of the very best line-voltage thermostats in terms of high-load thermal accuracy

Google — Apr. 2019 - Jul. 2019 (14w)
Software Engineering Intern - Kirkland, WA, US

- Constructed an automated canonical definition of multiple sources of code, by implementing a language parser using Abstract Syntax Trees in Dart, and integrating it with a filesystem watcher
- Decreased the running time of integration tests from ~2h30mins to ~30mins, by capitalizing on the caching of repeated operations across parallel tests

Mysa — Jul. 2018 - Apr. 2019 (10mo)
Software Developer - St. John's , NL, Canada

- Pioneered a machine learning pipeline using Scikit-learn, Docker + AWS Batch, Step Functions and DynamoDB, to quarter the relative error for time-to-setpoint prediction from 58% to 13% and boost energy savings
- Developed temperature correction models, by programming Arduino loggers for data collection, aggregating data using Pandas, and applying feature+model selection using Scikit-learn

Memorial University of Newfoundland — May 2018 - Aug. 2018 (4mo)
Undergraduate Research Assistant - St. John's , NL, Canada

- Investigated enhancements to generative ML models that increase entropy of output distributions, by applying Boosting techniques to GANs
- Proposed novel methods of encoding sequential data, such as music, in a form that optimises for GANs and other non-sequential models

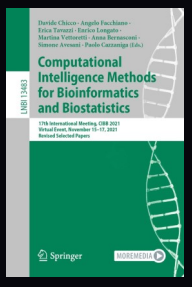
HeyOrca! — May 2017 - Jun. 2018 (1yr)
Junior Web Developer - St. John's , NL, Canada

- Quadrupled the speed of critical services through managed asynchronization of Laravel queues, optimization of data structures and logic refactoring
- Rebuilt and enhanced the frontend using ReactJS, along with Web Sockets and REST APIs, in order to create a more performant and resilient SPA

CERTIFICATIONS

aws certified
Solutions Architect
ASSOCIATE

PUBLICATIONS



Improving Bacterial sRNA Identification by Combining Genomic Context and Sequence-Derived Features

CIBB 2021

Mohammad Sorkhian, Megha Nagari, Moustafa Elsisy & Lourdes Pena -Castillo

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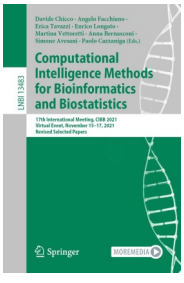

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