Rayhaneh Banyassady

📍 Toronto, ON

✉️ r.banyassady@queensu.ca

📞 +1-647-877-5664

🐙 github.com/rayhaneh

in linkedin.com/in/rayhanehbanyassady

Skills

Languages:

Typescript, Javascript, Fortran, Matlab, Python, PHP, C, C++

Frameworks & Libraries:

Node Js, Express, Koa, React, React-Native, GraphQL, Mongoose, Swagger

Databases:

MongoDB, PostgreSQL, MySQL

Cloud Services Platforms:

AWS (Lambda, S3, CloudFront, SSM, KMS, CodeBuild, IAM, API Gateway, CloudWatch)

CI/CT/CD Platforms:

Circle CI, Jenkins, SauceLabs

Testing:

Jest, Sinon, Chai/Mocha

Content Mangement Systems:

Wordpress

Concepts:

Parallel programming, High performance computing

Data Analysis and Visualization Tools:

Tecplot, MATLAB

Statistical Techniques:

Correlation Coefficients, Time Series and Spectral Analysis, Probability Density Function, Regression, Monte Carlo

Related Experience

Software Engineer   *2017-2018*

Onist Technologies

◉ Collaborated in building and documenting a rest-api that performs CRUD operations on Mongo databases.

  Stack: Node, Serverless, Koa, Typescript, AWS (Lambda, Codebuild, Cloudwatch, Cloudfront, Route 53), MongoDB, Mongoose, Swagger

◉ Collaborated in building the MVP version of an IOS application that enables user of Onist platform to access some of its functionalities on their smartphones.

  Stack: React-Native, Redux, Typescript, Observables, Websockets

◉ Developed a nightly cron job on AWS to automatically sync users' information from Onist databases into Mailchimp though its api.

  Stack: Node, Typescript, AWS (Lambda, Codebuild, Cloudwatch), MongoDB, Mongoose, GraphQL

◉ Set up the CI/CD pipeline for a new web application from development environment to QA and production.

  Stack: AWS (Codebuild, S3, Cloudfront, API Gateway, Route 53)

◉ Collaborated in maintaining a legacy code by fixing bugs and adding necessary new functionalities.

  Stack: Javascript, Meteor, MongoDB

◉ Collaborated in developing and maintaining end-to-end tests for Onist web application to automate sanity testing scenarios.

  Stack: Cucumber/Gherkin, Typescript

Mentor, Front-End Fundamentals   *2018-Present*

Lighthouse Labs

◉ Explained fundamental concepts of front-end web development, HTML, CSS, JavaScript, and JQuery.

◉ Provided small-group and one-on-one assistance to students in completing class works and projects.

◉ Explained basics of git, GitHub, and code versioning.

◉ Familiarized students with effective debugging and troubleshooting techniques.

Education

Full-Stack Web Development
Lighthouse Labs, Jul. - Sep. 2017

Ph.D. in Mechanical Engineering
Queen's University, Sep. 2010 - Nov. 2015

M.Sc. in Aerospace Engineering
Sharif University of Technology, Sep. 2007 - Aug. 2010

B.Sc. in Aerospace Engineering
Sharif University of Technology, Sep. 2003 - Aug. 2007

Volunteer Experience

Volunteer Mentor
Women Learn to Code Workshop, Lighthouse Labs, United Ways & IDRF, Jul. 2018

Volunteer Assistant
Café Étudiants, Centre Lartigue, Montréal, Winter 2016

Volunteer Judge
Regional Science Fair of Frontenac, Lennox & Addington, Kingston, Spring 2015

Research Fellow   *2010-2015*

Turbulence Simulation and Modelling Laboratory (TSM LAB)
Department of Mechanical and Materials Engineering
Queen's University

- Collaborated with teams of computational physicists to extend a parallel in-house flow solver (Python, F90) and develop a spectral flow solver (MATLAB).

- Developed several post-processing codes using advanced statistical methods to systematically analyze the collected data from a variety of angles.

- Parallelized (with MPI) some of the in-house post-processing codes to speed up the data analysis process through employing more than one processor at a time.

- Performed Numerical Simulations and collected 120 TB of simulation data and 5 GB of data from various sources in literature and, then, thoroughly examined and filtered datasets to disregard redundant data and extract the required information.

- Determined a hidden trend and came up with an explanation for a long-standing open-question in a flow (wall-jet) which improves the accuracy of industrial models in predicting drag force of this flow by 25%.

- Translated the results of statistical analysis to physical description of the flow through data visualization (tecplot, Matlab, gnuplot) and published the results in journals and conferences.

- Led a group of 5 Computational Fluid Dynamics (CFD) specialist to develop post-processing codes to extract data from three datasets (10 TB) and make an animation to show the difference between three turbulence models to non-CFD experts.