

LUCAS J. LAVALVA

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TECHNICAL SKILLS

Programming Skills	Top Programming Languages	Frameworks and Tools	Other / Miscellaneous
Test-driven development Machine Learning Object-Oriented Design Working with a UNIX machine Git / GitHub / GitLab	JavaScript / TypeScript / Node.js Python C / C++ Java PHP	React / React Native Angular MongoDB / MySQL / ElasticSearch Docker Bash / Shell Scripting	STEM Education Blender / AutoCAD Digital Systems / Circuit design Google Apps Script / GSuite Technical Writing / LaTeX

EDUCATION

Bachelor of Science in **Computer Science**, Bachelor of Arts in **Mathematics** anticipated May 2022
Rowan University, Glassboro NJ GPA: 3.9/4.0
Minor in Sociology, concentration in Honors President's List, Dean's List, Computer Science Honors Society (UPE)

RELATED EMPLOYMENT

Software Engineer (GiveSignUp|RunSignUp, Moorestown NJ) May 2021 - Present
Full Stack Development

Developed software for the GiveSignUp|RunSignup platform and worked with a large codebase written primarily in PHP and JavaScript with a MySQL database. Constructed APIs for GiveSignUp, worked on UI/UX design and implemented various other features.

Research Contractor (Bristol Myers Squibb and Rowan University CS Dept, Glassboro NJ) September 2020 - May 2021
Developer Operations / Front End Development

Built a framework to connect backend Natural Language Processing algorithms operating on patent data to a user-facing frontend.

Student Researcher (Rowan University Mathematics Dept, Glassboro NJ) February 2019 - April 2021
Nonbinary ECOC machine learning

Developed an optimal n-ary matrix construction for ensemble learning with Error-Correcting Output Codes resulting in a publication.

Internship Experience (Vericle/eSpoc, Marlboro NJ) January 2018 - June 2018
Front End Development

Used TypeScript with Angular 6 to develop a user interface for the company's bug report and feature request system.

OTHER EMPLOYMENT AND EXPERIENCE

Math and Programming Teacher (MindBytes, Marlton NJ) June 2020 - September 2021

Student Teacher Internship (Corey Waters, Rowan University, Glassboro NJ) January 2020 - May 2020

Tutor / Teaching Assistant (Rowan University, Glassboro NJ) September 2019 - December 2020

Window Repair Technician (Dr. J's Window and Screen Hospital, Point Pleasant NJ) Summers 2018-2019

EXAMPLE PROJECTS

TensorBeat (MIDI music generation AI with an interactive keyboard frontend)

Webscrapped over one million songs and performed feature extraction, and stored them in an Atlassian Database

Project Titan (Interactive phone system and information management tool for amusement parks)

Designed a voice-based user interface for ride operators and employees to log information to a database

Forum (Wikipedia-esc forum platform with users, permissions, and a comments section on each page)

Worked with a team to develop a system in which users can create and edit simple documents and comment

Nodevember 2020 (daily challenge to learn and use exclusively Blender3d's shader nodes to create procedural designs)

Created 30 procedural shaders on primitive objects in response to daily prompts. Available on Twitter [@LaValva Luke](#).

PUBLICATIONS

Optimal N-ary ECOC Matrices for Ensemble Classification IEEE 2021

Ensemble Learning using ECOC: New Classification Error Bounds IEEE 2021

REFERENCES

bob.bickel@runsignup.com (Bob Bickel, GiveSignUp|RunSignUp)

learn@mindbytes.co (Pavithra Lakshminarayan, MindBytes)

contact@drjswindowandscreenhospital.com (Tom Monardo, Dr. J's)

nguyen@rowan.edu (Hieu Duc Nguyen, Rowan Math)

hristescu@rowan.edu (Gabriella Hristescu, Rowan CS)

watersc@rowan.edu (Corey Waters, Rowan Sociology)