

LUCAS J. LAVALVA

GitHub: [LuLaValva](#)
lukelavalva@gmail.com

Website: [lukelavalva.com](#)
(732) 948- 9319

LinkedIn: [luke-lavalva](#)
Brielle, NJ 08730

TECHNICAL SKILLS

Programming Skills	Top Programming Languages	Frameworks and Tools	Other / Miscellaneous
Machine Learning Object-Oriented Design UNIX / Linux command line Test-driven development 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 Embedded Systems / Circuit design Excel / Google Sheets / Apps Script 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 Outstanding Senior Award, President'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)
Web scraped over one million songs and performed feature extraction before storing 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 post comments.

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) nguyen@rowan.edu (Hieu Duc Nguyen, Rowan Mathematics)
learn@mindbytes.co (Pavithra Lakshminarayan, MindBytes) hristescu@rowan.edu (Gabriella Hristescu, Rowan Comp Sci)
contact@drjswindowandscreenhospital.com (Tom Monardo, Dr. J's) watersc@rowan.edu (Corey Waters, Rowan Sociology)