Matthew Joseph Bisicchia

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Education:

Rowan University, Glassboro, NJ; Class of 2022
Graduate*, GPA: 3.91/4.00; *Summa Cum Laude

- Bachelor of Science - **Electrical and Computer Engineering**
- Minor - **Computer Science**
- Certificate of Undergraduate Studies in Combat Systems Engineering
- '20 – '21 President of Upsilon Pi Epsilon, CS Honors Society, Rowan Chapter
- Honors Program; Tau Beta Pi Engineering Society

Experience with:

- Java
- C++
- Java Spring Boot
- JavaScript, ES6, TypeScript
- Python
- Amazon Web Services, Cloud Computing
- CI/CD Pipeline, Automated Builds
- Node.js, Express.js, React.js, Redux
- MySQL database
- RESTful API; Insomnia, Postman
- Angular
- HTML5 and CSS
- Front & Backend Web Application Development
- Algorithm Development, Data Structures
- Software Requirements Specifications
- Code Documentation
- Object Oriented Programming and Design
- Knowledge of Functional Programming Paradigm
- Public Speaking, Product Demos, Tech. Writing
- Test-Driven Development (L1, L2, Regression)
- Unit testing (in xUnit framework)
- JIRA/Communication/Teamwork/Agile/Scrum
- Scikit-learn
- Git; GitLab, GitHub, Bitbucket
- Linux; Oracle VM Box
- Visual Basic, Visual Studio
- Unity Game Engine
- MATLAB
- Bi-Literacy in the Italian Language
- Embedded Systems, FPGA
- Verilog HDL, ModelSim, Cadence Virtuoso

Completed Coursework:

- Honors Data Structures and Algorithms
- Honors Design and Analysis of Algorithms
- Computer Architecture
- Intro. to Embedded Systems
- Foundations of Computer Science
- Honors O.O. Programming/Data Abstraction
- Very Large Scale Integration
- Intro. to Digital Systems
- Engineering Electromagnetics
- Electronics; Intro. to Systems and Control
- Principles of Biomedical Systems and Devices
- Advanced Cybersecurity (Graduate Level)
- Digital Signal Processing; Signals and Systems
- Intro. to Internet of Things (Graduate Level)

Employment/Volunteerism

Software Engineer Internship and Co-op, Lockheed Martin
Moorestown, NJ **May 2020 – August 2020; May 2021 – Jan. 2022**

- Scrum, Agile framework; member of highly collaborative, DevOps driven team; conducted product demos to public speak/present before 40 other engineers/managers.
- Independently initiated development and completed a working state of a frontend for a new web browser-based interface; HTML, CSS, JavaScript (Oct. '21 – Jan. '22).
- Wrote and performed tests in C++ xUnit framework to improve code coverage for multiple code modules by up to 60% or 85%, depending on the module.
- Updated deprecated legacy code (C++) and implemented new features, referring to Software Requirements Specifications and other technical documents.
- Carried out regression tests for debugging and verifying new features/code updates.

CS Department Tutor – Computer Programming, Data Structures/Algorithms
Rowan University, Glassboro, NJ **Fall 2019, Fall 2020, Spring 2021**

- Also included assisting a Fall 2019 class of 16 students in Intro. to O.O. Programming.
- Realized passion for teaching and helping fellow colleagues.

Resident Assistant, Rowan University, Glassboro, NJ **2019-2020**

- Oversaw floor of 22 residents. On duty with another resident assistant approximately 4 times per month for the entire building of about 350 freshmen.
- Wrote incident reports and duty logs. Performed health and safety inspections. Provided resources to students. On family-like team which emphasized working together.

Maintenance, St. Joan of Arc School and Church, Marlton, NJ **Summer 2018**

Volunteer Service, Virtua Marlton Hospital, Marlton, NJ **Feb. 2018 - June 2018**

- Volunteered in the surgical waiting room by assisting families of patients waiting for information. Maintained confidential paperwork regarding the status of patients.

Programming Project Experience

Development of Cloud Applications and Website **March 2022 - present**

- Developing personal website using Node.js and React.js; deployed using AWS.
- Includes **"MyDashboard" App** (Java Spring, Angular) and **"BioLab" App** (**started May 2022,** React, Redux, Express) (link to personal website is at top of Resume).
- Both apps specify RESTful API to connect to MySQL database (AWS RDS).
- Site includes link to **"2D Video Game Template,"** part of a May 2020 passion project.
- Uses AWS Elastic Load Balancers for HTTPS configuration.
- Website and "BioLab" use AWS Code Pipeline connected to source code on GitHub, to allow for continuous integration and deployment (CI/CD).
- Code repositories accessible on GitHub (link at top of Resume).

Development of Hospital-based Medical Software System
Rowan University, Glassboro NJ **Spring 2022 - present**

- Assisting team developing iOS/Android platform for medical personnel.
- Developing frontend in React for deployment of dashboard system and for data visuals.

Research of Efficiency of Ensemble Methods for ICU Mortality Prediction
Rowan University, Glassboro NJ **Fall 2020, Spring 2021**

- Wrote Python scripts (executed on Linux server) to analyze hyperparameter-tuned Scikit-learn ensemble machine learning methods (Bagging and Boosting techniques) for predicting 24-hour patient survival in ICU; compared to a neural network approach.
- Experience with Big Data. Utilized tools such as Data Imputation, SMOTE (Synthetic Minority Oversampling Technique), Numpy, and Pandas for preparing the imbalanced data set which had a minority class that needed to be accounted for, and used K-Fold Cross Validation and Grid Search to train the machine learning models.
- Utilized computed confidence intervals and ROC AUC (area under the receiver operating curve) to compare the performance of the algorithms to each other.