Mohammed Mowla

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Education

Stockton University Galloway, NJ
Bachelor of Science in Computer Science, Minor in Mathematics *Aug. 2020 – May 2024*
GPA: 3.79 | **Honors:** Stockton University Provost's Scholarship (4 Years)

Experience

Federal Aviation Administration June 2024 – Present
Student Intern - A.M.M.S. *Egg Harbor Township, NJ*

- Developed **109** risk reduction tests for an Air Traffic Technical Operations **iOS** app, using **Appium** and **Python**
- Led a team of **11** interns in the development of an extensive organizational Wiki site using **Confluence** and **Jira** integration for the Air Traffic Safety Management Team
- Conducted research on **LLMs** and their potential to accelerate Test and Evaluation **(T&E)** within the FAA

Stockton University Sep. 2023 – May 2024
Student Tutor *Galloway, NJ*

- Assisted **30+** computer science students in Programming 1 & 2 in **Java** and **Python**, offering guidance on coding concepts such as stacks, queues and trees.
- Conducted 1-on-1 tutoring sessions in math disciplines including physics programming, discrete math, and calculus
- Employed various teaching methedologies to increase student interaction and growth

Federal Aviation Administration June 2023 – Aug. 2023
Student Intern - A.M.M.S. *Egg Harbor Township, NJ*

- Led the implementation of **Appium** automation on an Air Traffic Technical Operations **iOS** app using **Java**
- Assumed co-leadership in a cohort project, providing guidance to **6** interns in understanding the virtualized instillation of Simulated Driver Radar Recorder **(SDRR)**
- Utilized a virtualized **Ubuntu** shell environment via **MobaXTerm** to install, use, and gain an understanding of the applications of **SDRR** and its ecosystem

Research

Lake Fred Research Project Jan. 2023 – Nov. 2023
Stockton University - Math Research *Galloway, NJ*

- Gathered geospatial data from Lake Fred at Stockton University and applied the **SciPy** library to perform a **Delaunay Triangulation** to extract triangulation information
- Employed Blender's **Python API** to transform **2K+** points into a triangulation of a 3D model of the lake which allowed for exporting the model into a 3D printable for better visualization and understanding of the lake bed
- Developed a website using **Three.js**, **Vite**, and **Bootstrap** to visually depict and interact with the 3D lake model, allowing users to view the surface and wireframe

Projects

DCGAN Animal Image Generation | *PyTorch, Python, Computer Vision* April 2024 – May 2024

- Conducted preprocessing of images from Animal-10N and Kaggle Cats & Dogs datasets for image generation
- Developed **DCGAN** models in **PyTorch** utilizing Batch Normalization, ReLU activations, and BCE Loss.
- Trained best model for **1k epochs** on **12.5K** cat images, resulting in a **70%** quality increase on generated images

Desktop Inventory Application | *Java, Maven, Git, MySQL, JavaFX MVC, FXML* May 2018 – May 2020

- Streamlined inventory management for a local business by developing a **JavaFX** desktop application
- Implemented **CRUD** functions on a **MySQL** database that validates admins, tracks inventory, and logs buyers
- Incorporated an order tracker, view filters, sortable tables, responsive search, and email functionality

Technical Skills

Languages: Java, Python, JavaScript, HTML/CSS, SQL (MySQL), PHP, C#
Frameworks: Node.js, TailWindCSS, Bootstrap, Svelte, WAMP, Apache Tomacat
Developer Tools: Visual Studio, IntelliJ, PyCharm, Git, VS Code, Eclipse, Blender, Maple, Angular
Libraries: Three.js, p5.js, NumPy, PyTorch, Matplotlib, SciPy, JFreeCharts, JUnit