Mark Otoigiakhi

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**EDUCATION**

**Kean University Union, NJ**



M.S. in Computational Science January 2022



**Kean University Union, NJ**

B.S. in Science and Technology (Concentration - Computational Science/Applied Math) January 2021

**COURSES TAKEN**

Data Analysis and Visualization, Software Engineering, High Performance Computing, Quantitative Analysis, Pedagogy of Modeling, Spectral Methods, Data Structures, Discrete Structures, Mathematical Descriptions, Statistical Methods

**TECHNICAL SKILLS**

**Languages:** Java, Python, C/C++, MATLAB, SQL, PHP, HTML, UI/UX, R

**Developer Tools:** Eclipse, Jupyter, Colab, MySQL, Putty, Figma, Canva

**Libraries:** NumPy, Pandas, Matplotlib, scipy, mpl\_toolkits, TensorFlow, ArrayList, Java.Util.Scanner

**EXPERIENCES**

**Crystalry Website** (Sept 2020- Dec 2020)

* Served in a team project as documenter/front end for developing a shopping site.
* Administered agile development by structuring and testing the site’s functions in sprints.
* Consulted with a client weekly to achieve an objective to sell products.
* Discussed with teammates about tasks uploaded on Slack. Elicited instructions for coding in features for the site to run as intended.

**PROJECTS**

**Mathematical Descriptions of Spatial Pattern Formation** (Jan 2021- Dec 2021)

* Consulted with advisor for weekly assessments of the 40-page thesis and simulations.
* Implemented the Turing Pattern into MATLAB scripts for spatial pattern simulations.
* Generated a 1D simulation to obtain a sin wave representing stripes. 
* Generated two 2D simulations by reshaping the two matrices as one vector. Changed parameters to form spots and stripes.
* Computed the finite difference of the 2D simulations using interpolation.
* **M. Otoigiakhi and T. Farnum**, “Mathematical Descriptions of Spatial Pattern Formation”, Kean University NJCSTM, Dec 2021.

**Smogon NU Dataframe Analysis** (2020)

* Theorized solution for connecting Pokemon’s performances with their tier usage rates.
* Imported raw dataset from Smogon’s 2018 NU list and developed a dataframe derived from it containing 400 Pokemon.
* Plot several graphs via dataset using Matplotlib, Seaborn, Pandas, NumPy and MplTookits using Python.
* Designed a bar graph of highest ranked NU Pokemon using plt.bar.
* Simulated a horizontal bar graph and linear scatter plot of non-NU Pokemon using plt.bar and plt.scatter.
* Succeeded in presenting explanations of Pokemon’s performances tying to their usage rates and tier placements.