# Jose M Serra Jr.

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## EDUCATION

**New Jersey Institute of Technology**                                    Newark, NJ
*Master of Science in Data Science GPA: 3.250*                    *Sept. 2023 – May. 2025*

**Kean University**                                                              Union, NJ
*Bachelor of Arts in Mathematical Science Data Analytic Option GPA: 3.328*     *Jan. 2021 – May. 2022*

**Passaic County Community College**                                Paterson, NJ
*Associate of Science in Physical Science GPA: 3.12*              *Sept. 2018 – Dec. 2020*

## PROGRAMMING SKILLS

**Languages**: Python, R, C#, Java, SQL, Excel, Bash, MS-DOS, PowerShell

**Technologies**: AWS, .NET Framework, TensorFlow, Keras, PyTorch, Sci-kit learn, Git, GitHub, Bitbucket, NumPy, SciPy, Pandas, Plotly, Matplotlib, Excel, Minitab

## RELEVANT COURSE WORK

**Classes** : Single Variable Calculus, Multi Variable Calculus, Differential Equations, Algebra, Linear Algebra, Matrix Algebra, Trigonometry, Geometry, Discrete Structures, Applied Machine Learning, Applied Statistics, Artificial Intelligence

## EXPERIENCE

**Self-Employed**                                                               Remote
*Technology Blogger*                                                    *Nov. 2023 – Present*

- **Data and Computer Science**: Write articles about topics in Computer Science and Data Science. Topics include programming, artificial intelligence, web scraping, mathematics, and various topics. Blog link: https://medium.com/@joseserra803

**Panasonic**                                                                    Newark, NJ
*Software Engineering Intern*                                          *Nov. 2022 – Present*

- **Application Developing**: Developed applications in C#, JavaScript and Python for internal, and external usage by increasing program efficiency by 10% by utilizing PowerShell scripting to better handle exceptions, and installation of applications. Using libraries like Flask, Pandas, NumPy, and Plotly.js developed a web application with dynamic visualizations increasing response time to customer issues by 20%.
- **Application and BIOS Testing**: Tested UWP, and .NET Applications developed by Panasonic on Panasonic TOUGHBOOKs resulted in increase of customer support company responsive by 2%, as well as custom BIOS for specific customers ensuring that the device functions as desired leading to customer retention.
- **Product Development Life cycle**: Collaborated with stakeholders, engineers, and developers on several projects. Participated in requirements gathering, design, development, and testing phases. Involved in project schedules, and resources to deliver products in a timely manner.
- **Data Analysis**: Used Microsoft's Power BI and Excel to construct visualizations for management surrounding customer data.

**Varsity and Private Tutor**                                          Remote
*Academic Tutoring*                                                      *Nov. 2022 – Present*

- **Tutoring**: In subject area that feel comfortable with such as Chemistry, Calculus, Physics, Python, Java, Machine Learning, Algebra, and other undergraduate courses. Tutored also high school, and middle school topics.

**Kean University**                                                            Union, NJ
*Research and Teaching Assistant*                                   *Sept. 2021 – Dec. 2022*

- **Convolutional neural networks, Recurrent Neural Networks, and Transformers**: Published three research papers in the field of Artificial Intelligence. Using CNNs and Facebook's DETR, investigated weather phenomena known as ITCZs, documented CNN performance using a database, and developed GitHub repository for project. Employed RNNs and BERT transformers to explore language translation and next word generation in text.

- **Teaching Assistant for TECH 1010 Cohort and AI4ALL**: Served as a Teaching Assistant for the Computer Science Department's TECH 1010, handling tasks such as grading assignments, attendance, and assisting students during classes and office hours. TA'd for the AI4ALL curriculum intro course, with similar responsibilities for students.

**Krispy Kreme**                                                                                      East Rutherford, NJ
*Supervisor*                                                                                          *Apr. 2020 – Present*

- **Customer Service**: Worked in Customer Service handling customers complaints, and ensuring that they received the utmost quality care. Also partook in Inventory Control, using Management Skills to ensure that the store functionality was running at full capabilities.

## PROJECTS

**ITCZ Research**: Presented research paper at Rutgers Louis-Stokes Association for Minority Participation Conference and Great Minds in STEM Conference

**Cancer Breast** : Developed a linear model using Machine Learning Algorithms as well as used common processing techinques with Scikit-Learn library in Python.

**Panasonic Magic Configurator**: Helped design, build, and test C# application that would gather links and facilitate installation of software onto customer units leading to an increase in customer retention by 10%

**Mobile DNA Python Web Scraper**: Developed a web scraper to mine the Mobile DNA biology journal using BeautifulSoup, and requests.

**Mobile DNA R Web Scraper**: Developed a web scraper to mine Mobile DNA journal using rvest, httr, tidyverse, and tidyr.

**Mobile DNA Java Web Scraper**: Developed a web scraper to mine Mobile DNA journal using BeautifulSoup.

**Mobile DNA C# Web Scraper**: Developed a web scraper to mine Mobile DNA journal using HTMLAgilityPack.

**MNIST Image Recognition**: Developed a custom CNN for identifying handwritten numbers in MNSIT dataset

## PUBLICATIONS

**J. Serra**, ..., "Validation of AI models for ITCZ Detection from Climate Data", Proceedings of the IEEE Conference on Data Science and Information Technology (DSIT '22), Shanghai, China, July 22-24, 2022

N. Tellez, **J. Serra**, ... , "An Assure AI Bot (AAAI bot), International Symposium on Networks, Computers, and Communications (ISNCC '22), IEEE, Shenzhen, China, July 19-22, 2022, pp. 1-5.

N. Tellez, **J. Serra**, ..., "Gauging Biases in Various Deep Learning AI Models", 2022 Intelligent Systems Conference (IntelliSys '22), In: Aria, K. (eds) Intelligent Systems and Applications, vol 544. Springer, https://doi.org/10.1007/978-3-031-16075-2_11

## CERTIFICATIONS

- **Amazon Certified Cloud Practitioner**:   Earned from Amazon Web Services Certification and Training

- **Google Data Analytics**: Earned from Coursera.

- **DeepLearning.AI TensorFlow Developer**: Earned from Coursera.

- [**PCEP-30-01**] **PCEP – Certified Entry-Level Python Programmer**: Earned from the Python Institute.

- **Python (Basic)**: Earned from HackerRank.

- **Heartsaver CPR & AED**: Obtained certification from Safety Staff at Panasonic Corporation of North America

## VOLUNTEERING

- **Blood Donor New York Blood Center**: Donate Blood at local New York Blood Center events.

- **Blood Donor Vitalant**: Donate Blood at local Vitalant Blood Center events.