SAMIR SANCHEZ TEJADA

Mobile: +1-(978)-985-2348 | Email: ses2313@columbia.edu | www.linkedin.com/in/samir-sanchez-3ac | https://github.com/Samir0051/

EDUCATION

Columbia University, Fu Foundation School of Engineering and Applied Science *New York, NY*
Relevant Coursework: Data Structures In Java, Discrete Mathematics, *Expected Graduation: May 2026*
Accelerated Multivariable Calculus, Intro to Mechanics and Thermodynamics, Art of Engineering

SKILLS & INTERESTS

Languages: Java (Proficient), C++ (Proficient), Python (Learning), HTML (Proficient), CSS (Proficient), English (Fluent), Spanish (Fluent), Mandarin (Studying), JavaScript (Learning)
Applications: IntelliJ, Visual Studio Code, jGRASP, Arduino IDE, Jupyter Notebook, Microsoft Office, Vue, Node.js
Organizations: Hispanic Scholarship Fund Scholar '22, ColorStack, Society of Hispanic Professional Engineers, JADE

RELEVANT EXPERIENCE

HeadStart *New York, NY*
Fellowship *January 2023– Present*
- Selected to technology sector of HeadStart's 3rd Fellow Cohort out of a highly competitive pool of over 500 applicants
- Build expertise in software development, project management and interviewing with hands-on projects and mentoring

Jane Street Academy of Math and Programming (AMP) *New York, NY*
Program Participant *July 2022– August 2022*
- Participate in the inaugural summer of AMP, as one of 40 selected students, that focused on computer science, combinatorics, and number theory, and prepared students for the challenges of STEM majors and careers
- Design, implement, and present efficient algorithms for solving mathematically-focused puzzles and problems using Python Strings, loops, lists, tuples, and dictionaries

BAE Systems *Nashua, NH*
Internship *April 2021– June 2021 & September 2021– October 2021*
- Create a cell signal enhancer using aluminum foil and cardboard to rise cell signals significantly
- Develop an enhanced plane model after analyzing thrust, drag and lift that was presented to workers and participants
- Learn circuitry and software by wiring buttons and LEDs on a breadboard and manipulate them to work using software

PROJECTS

Personal Website Portfolio *New York, NY*
Independent Coding Project *January 2023– Present*
- Utilize Vue and Node.js frameworks to develop website showcasing my experiences, projects and research
- Combine HTML, CSS and JavaScript files on Visual Studio Code to create and design website
- Implement AOS library to incorporate scrolling animations that enhance UI experience

Lucky Bird *New York, NY*
Collaborative Project *October 2022– December 2022*
- Develop flappy bird clone in C++ with an Arduino, input detection, LED panel, and user interface functionality
- Design and construct arcade machine using SOLIDWORKS that encases the game
- Work within team of 5 students weekly, and allocate our skills for design, construction and code

Single Cell Segmentation *New York, NY*
Collaborative Coding Project *October 2022– December 2022*
- Train a U-Net model onto a data set to perform single cell segmentation on Jupyter Notebook using Python
- Use 50 epochs to train neural network, and compare it to original test set by analyzing DICE score per epoch
- Determine best epoch to model data and compute its performance on the test samples yearning an accuracy of 98.4%
- Present results of the best-performining model to Columbia's Biomedical Engineering Department

Brick Breaker *Litchfield, NH*
Independent Coding Project *April 2021– June 2021*
- Design an object-oriented brick breaker game in Java using Java OpenGL graphics library
- Adjust the ball's physics depending on how far from the platform's center the ball hits and if ball collision is detected
- Utilize different object classes, arrays, loops and user keyboard input detection to develop the game

The Effects COVID-19 Has Had on the Homeless *Litchfield, NH*
Independent Research *January 2021– June 2021*
- Interview about 20 homeless shelters across New England
- Develop a questionnaire for data compilation to analyze through Google Sheets
- Compile a 18-page paper documenting methodology, results, and its implications
- Present research at the NCSSS student research conference to over 100 audience members