Joshua Hizgiaev

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EDUCATION Stevens Institute of Technology Hoboken, NJ

Bachelor of Science in Computer Science Expected May 2026
Honors: Edwin A. Stevens Scholarship, Dean's List Fall 2022 - Spring 2023, Accelerated Masters
GPA: 3.9/4.0
Relevant Coursework: Data-Structures, Discrete Mathematics, Physics: Mechanics, Physics: Electricity, Multivariable Calculus, Vectors and Matrices

SKILLS
Programming: C, C++, HTML/CSS, JavaScript, Java, Python, Latex, Scheme/Racket
Data Science Tools: Pandas, SciPy, NumPy, Jupyter Notebook, Matplotlib, Plotly, Plotly Dash, Yahoo Finance, Google Finance API
Linux: Ubuntu, Fedora Workstation, UNIX
DevOps: Github, Git
IT: Microsoft Office Suite, macOS, Google Suite, Microsoft Windows, Git
Languages: English, Russian

EXPERIENCE
Stevens Institute of Artificial Intelligence
Undergraduate Research Intern Jun 2023 - Present
- Perform deep data analysis and cleaning on large datasets of **5 terabytes** of U.S. economic and employment data using Python scientific libraries: **Pandas**, **SciPy**, **NumPy**, and **Matplotlib**.
- Create AI-powered tools utilizing **OpenAI API** and **GPT-4** for web applications with **Python**, **Plotly Dash**, and **Jupyter**.
- Produce a **Cumulative Frequency Analysis** and **Comparison Analysis** on the LightCast U.S. Employment database to analyze the growth of Data Science skills (Machine Learning, Data Analysis, Python, etc) with Statistical T-Tests.
- Create a **Convolutional Neural Network** with **PyTorch** for a **sentiment analysis model** to take as input U.S. job advertisements and output the desired skill and industry of a job with over **90% accuracy**.

Stevens Institute of Technology
Undergraduate Research Assistant Apr 2023 - Present
- Perform static site generation performance testing using **Sphinx** and **Hugo** static site generation.
- Create custom RestructuredText directives using **JavaScript** and server scripts with **Python** to statically host Sphinx apps.
- Create a full textbook static site using **Sphinx** documentation generation as proof-of-concept **HTML/CSS**
- Implemented a search tool that uses regular expressions to find relevant documents for ease of use to users.

PROJECTS
GPT4All | *Open AI API, Flask, GPT-4, Python*
- Python based **Plotly Dash** web app using **Flask** to host a **GPT-4 chat app**
- Allows users with an **OpenAI API** key to have near unlimited access to optimized GPT-4 query for quick responses.
- Allows users to select which GPT model they can use from GPT-3 and its popular **GPT-3.5-Turbo** version to GPT-4
- **3 times faster GPT-4 response time** compared with local hosting using Jupyter or Visual Studio Code

Stocko Finance Bot | *Python, Discord.py, Matplotlib, Pandas, Yahoo Finance, Financial Statistics*
- Discord bot built in **Python** using **Discord.py** libraries, **Plotly, Matplotlib, Pandas, and Yahoo Finance**
- Features graphing and plotting of **stock performance** from 1970 to present, **historical volatility,** and stock **MACD.**
- **Real-time stock ticker** on stock data such as Open, Close, Volume, High, and Low
- Graphing and plotting of any appropriate ratio statistic of a stock including **Sharpe-Ratio, M2 Ratio, and Sorting Ratio**

SGB-Courses | *JavaScript, Python, HTML/CSS, Web-Assembly, Emscripten, Static-Site Generation, Sphinx*
- Designed a complete front-end Text-Book Website with Sphinx Static Site Generation for graduate level course taken by **50+ graduate students** for Introduction to Computer Science
- Use **Web Assembly**, **HTML/CSS**, and **JavaScript** to create a Pyodide-WASM code editor for students to type **Python** code in a live editor and run test scripts similar to LeetCode.
- Create **JavaScript** quiz tools to allow students to take online quizzes rendered using Markdown.

A-Star and Dijkstra's Pathfinding Algorithm Visualizer | *Java, Java AWT, GUI, Algorithms*
- Full pathfinding visualization built with **Java** with **Java Swing** and **Java AWT** graphics library.
- Accurately visualizes both the A-Star and Dijkstra algorithm in a 2D resizable grid that features a maze builder
- Capable of plugging in other pathfinding algorithms such as Breadth First Search (BFS)

ACTIVITIES
Stevens Computer Science Club, Robotics Club, Stevens Linux User Group, Software Engineering Club