Brett Harrison Bono

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EDUCATION

James Madison University, Harrisonburg, Virginia May 2025 *Bachelor of Science in Mathematics; Major: Mathematics, Minor: Computational Analytics* **Relevant Coursework:** Data Structures & Algorithms, Discrete Math, Numerical Analysis, Complex Analysis, Real Analysis, Topology, … more

PROGRAMMING SKILLS

Proficient in ***Java, Python, Excel, JavaScript(React-Native), TypeScript, R, Maxima, Mattlab, Latex | Minor Experience with GoLang (GRPC), C, C++***

EXPERIENCE

Self Employed, Williamsburg, VA, Jan 2013 – Nov 2021 • Started my own lawn business in middle school that continued throughout my gap year.•Expanded the business to managing 10 properties in highschool. •Kept my own balance sheets and found out what was the best way to price my services compared to competitors.

Tutoring, Harrisonburg, VA May 2023 – Aug 2023 • Tutored mathematics to a couple people who needed help for the ASVAB

Other Various Highschool Jobs - Benny's Pizza (Pizza Maker), Busch Gardens (Ride Operator)...

GetOutOfficial Owner, Harrisonburg, VA May 2023 – Present •Owner of an event management app that is still being worked on. • Coded parts of the app and have gone through industry competitor balance sheets to see if the app is worthwhile • The app is focused on creating an event platform similar to Eventbrite but on a micro level. Its focus is to promote a competitive environment within the event management sphere.

PROGRAMMING PROJECTS

Web Scraping Program May 2022 • Built a program to web scrape craigslist, ebay, and facebook marketplace with intents to find arbitrage events within the used item market. I got very far and managed to pull items and sort them from each website. For each item I got photos, descriptions, names, and wanted to see if the same items were on a different market but selling for a higher price. As I was about to start applying some analytical and statistical algorithms on the data I had to unfortunately end the project due to craigslist changing its TOS.

Root Finding Algorithms Jan 2023 • Created a couple different root finding algorithms I learned in class. I programmed one for Newton's Method, Secant Method, Fixed Point Iteration, Bisection Method. Each one has their own strengths and weaknesses depending on the function given to you.

Edgar Filings Script May 2024 • For the app that I have been creating, GetOut, I wanted to compare balance sheets between similar public entities. Getting the 10qs and 10ks off of edgar manually was very annoying. I created a script to pull the edgar information I needed and to automatically put it in a google sheets spread so that I could compare one company's cash flows or whatever to another in the same industry.

Numerical Algorithms (Python) Aug 2024 • Singular Value Decomposition - Created a script to use SVD to do image approximation, watermarking of images, and plotted ovarian cancer data with SVD information. • Least Squares - Polynomial Interpolations involving chebyshev points and least squares fitting through Normal Equations , QR factorization, and SVD. • Google Pagerank Algorithm - based on a report about how google did page ranking via linear algebra, I reconstructed their importance score algorithm and revisited some proofs about stochastic matrices and eigenvectors. •Eigenvalue and Eigenvector Algorithms - Coded the Rayleigh Quotient Iteration, Power Iteration, Inverse Iteration, and QR algorithm and compared their convergences.

COMMUNITY ENGAGEMENT AND LEADERSHIP EXPERIENCE

Blockchain Club, Harrisonburg, VA Jan 2023• This club talks all about the use cases of blockchain technologies as well as covers financial use cases of cryptocurrencies

Competitive Programming Club**,** Harrisonburg, VA 2024• This club is all about becoming a better programmer. Each session they host mini coding challenges and competitions. This club was started by my friend, and apartment roommate.

JMU Esports**,** Harrisonburg, VA 2022 • Joined the JMU esports team for counter-strike 2.

GMRES (Generalized Minimum Residual Presentation) Talk : Harrisonburg, VA 2024• This was a class presentation which was conducted solo. I covered Gauss-Jordan complexity, Krylov Subspaces,the Arnoldi Process, and the basic GMRES algorithm. Then briefly covered a GMRES(m) algorithm, touching on complexity and accuracy. I also wrote a report on the subject.

ADDITIONAL SKILLS AND INTERESTS

Investing**,** Since my gap year in 2020, I have been very fond of learning more about investing and risk analysis. I have learned options, risk hedging (such as delta hedging, spreads, and scalping), forex, and have even bought corporate bonds.