

# Savrina Salartash

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## EDUCATION

**Georgia Institute of Technology** | Atlanta, GA

Expected Graduation: December 2024

*Master of Science in [Bioinformatics](#)*

GPA: 4.0

**Villanova University** | Villanova, PA

August 2019 – December 2022

*Bachelor of Science in [Comprehensive Science](#)*

GPA: 3.65

## RESEARCH EXPERIENCE

**Machine Learning Graduate Research Assistant** | [Amirali Aghazadeh \(AMIR\) Lab](#)

August 2023 - Present

- Actively collaborating with a multidisciplinary machine learning research team in the development of ProtiGeno, an advanced deep learning model with **93% precision** on 4,288 prokaryotic genomes, contributing extensive biology and bioinformatics knowledge to enhance its predictive accuracy for coding and noncoding regions in proteins
- Performing literature review of relevant biological interests, implementing Hidden Markov Models, and assessing the complexity of short genes (<100bp) with the goal to improve ProtiGeno's predictive **accuracy by 90%**

**Undergraduate Research Assistant** | [Curry Lab of Ornithology](#)

December 2019 – May 2023

- Conducted quantitative analysis of **over 500 D notes** (threat communication component of the chick-a-dee call) of Carolina, black-capped, and hybrid chickadees, developing strong data analysis, visualization, and interpretation skills
- First author of 70-page senior thesis and multiple international conference presentations, and currently in publication process of analysis of D note variation as it relates to ancestry genotype, sex, note sequence, and beak depth

## PROJECT EXPERIENCE

**Shrek Quote Generator App** | Python, PyTorch, TensorFlow, API integrations

May 2023 - Present

- Developing an application using AI frameworks including PyTorch, TensorFlow, and GPT-based natural language processing (NLP) models, achieving high accuracy in generating character-specific quotes through training

**Website Portfolio** | HTML, CSS

April 2023 – June 2023

- Built a dynamic personal website portfolio using HTML and CSS, resulting in a professional online presence that showcases my skills, projects, and achievements, receiving **100% positive** user feedback on usability
- Implemented responsive design techniques and media queries to ensure seamless user experiences across various devices and screen sizes

[TheraPet](#) | HTML, CSS, JavaScript, Python, C++, Swift

March 2023 – Present

- Worked with a cross-functional team of 4 individuals to develop a working Figma prototype (part of RoboTech 2023) for a mobile app that connects users with shelter animals for the purpose of short-term interaction and long-term health benefits

## RELEVANT COURSEWORK

**Database Development Application** | SQL

August 2023 - Present

- Collaborating in a 4-member team to design, implement, and test a MySQL-based database application, emphasizing strong teamwork, problem-solving, and adherence to project methodology
- Leading phases spanning extended/enhanced entity-relationship diagram (EERD) creation, schema development, dataset integration, and SQL optimization, ensuring data integrity and functional alignment
- Developing a graphical user interface (GUI) -based application, while upholding high-quality standards and fostering effective team communication and collaboration

**Bioinformatics Programming Projects** | Bash, Python, Blast, Mamba, Conda

August 2023 - Present

- Leveraging Unix/Linux command-line environment to work with large biological datasets, demonstrating proficiency in essential Unix utilities and shell scripting for data manipulation and analysis
- Developing Python scripts to perform intricate analyses on biological data, showcasing the ability to work with Python in a bioinformatic context, from simple scripting to more advanced data analytics and data cleaning
- Acquiring a strong programming foundation, empowering the application of programming skills to various bioinformatics, machine learning, and software/technological development domains

## SKILLS

**Programming Languages:** Java, Python, SQL, Bash, HTML, CSS, C++, JavaScript, R, Swift, C#, React

**Technologies, Platforms, and Frameworks:** Linux, Git, VS Code, Jupyter Notebook, Figma, NumPy, Pandas, TensorFlow, PyGame, PyTorch, Mongo, GCP, Spark, Power BI, AWS, Conda, Mamba, Command Line, Node.js, MATLAB, MySQL, machine learning, deep learning, Hidden Markov Models, natural language processing, neural networks, Raven Sonogram Analysis, FileMaker Pro, JMP

**Relevant Coursework:** Introduction to Database Systems, Genomics and Applied Bioinformatics, Programming for Bioinformatics, Algorithms and Data Structures, Discrete Structures, freeCodeCamp Responsive Web Design, Microsoft Foundational C#

**Organizations:** Girls Who Code, Data Science @ GT, Machine Learning @ GT, Engineering World Health, Product @ GT