JULIANNA GOLDBAS

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Education

- **New York University, New York** **Jan 2021 – May 2023**
  Master of Science in Computer Science
- **University of Colorado, Boulder, Colorado** **Aug 2009 – Dec 2014**
  Bachelor of Arts in Neuroscience

Skills

Programming Languages:	C++, Java, Python, SQL
Web Development:	Streamlit, Django
Design & Prototyping:	Figma
Graphic Design Software:	Adobe InDesign, Photoshop, Illustrator
Computer Science Fundamentals:	Design and Analysis of Algorithms, Principles of Database Systems, Operating Systems
Advanced Computing:	Machine Learning, Software Engineering, Cryptography, Information Security & Privacy
User Experience:	Human Computer Interaction

Work Experience

- **Teaching Assistant** **Jun 2022 – May 2023**
  New York University Bridge Program
  - Pioneered the design and finalization of 3 comprehensive practice exams, leveraging C++, functional programming, recursion, and object-oriented programming skills to ensure exams were challenging and enlightening.
  - Expertly graded assignments spanning discrete math, data structures, computer hardware, and operating systems, ensuring consistency and professionalism.
  - Collaborated with a team of teaching assistants, emphasizing teamwork, empathy, patience, and continual learning, while managing academic honesty concerns and student retention in an intense program environment.
  - Offered specialized guidance via Zoom office hours and platforms like EdStem and Slack, using communication skills and debugging expertise to clarify advanced concepts to both novices and advanced learners.
  - Manifested proficiency in programming tools and IDEs like Visual Studio Code and CLion, exemplified by an instructional YouTube video on CMakelists configuration.
  - Strategically balanced TA responsibilities with personal graduate coursework, underscoring exceptional time management, while embracing technologies such as tablets for enhanced teaching methodologies.
- **Research Technician** **Apr 2019 – Jan 2020**
  Laboratory of Dora Angelaki at New York University | New York
  - Spearheaded neurophysiological activity screening and data organization using hardware and software systems, proficiently utilizing tools like Matlab, C++, Python, and Linux to capture and manage diverse neural and behavioral datasets.
  - Designed, calibrated, and optimized complex behavioral testing assemblies tailored for mouse training, integrating virtual reality and freely-moving rigs. Ensured precise stimuli delivery and uniform training environment.
  - Demonstrated depth in histology for mouse brain tissues, undertaking tasks from slicing to staining. Conducted genotyping via tail clips and monitored mouse breeding and overall health.
  - Executed stereotaxic surgical procedures, maintaining a commendable survival rate post-operation and ensuring successful habituation of mice into behavioral testing environments.
  - Showcased innovation in assembling behavioral rigs on a budget, employing 3D-printing with tools like Fusion360, alongside small-circuit building with Arduino fixtures and microelectrode arrays for brain implantation.
  - Authored comprehensive mouse behavioral protocols, achieving key KPIs, including effective mouse training, systematic data organization, and fostering productive weekly discussions within the mouse research team.

Projects

- **Snake Game (Java), Individual Project** **Oct - Dec 2021**
  - Developed a dynamic game using Java language fundamentals and Eclipse IDE, emphasizing object-oriented design and inheritance principles.
  - Addressed complex challenges in the game's GUI, mastering event handling and devising advanced logic for seamless snake movement.
  - Integrated JDBC for real-time database connection, capturing and displaying top 5 high scores, exemplifying the project's functionality and timely completion.
- **Database for a Law Firm (PostgreSQL, Python), Group Project** **Oct - Dec 2022**
  - Designed and implemented a sophisticated relational database system using SQL and PostgreSQL tailored for a law firm, emphasizing complex entity sets and relationship sets for enhanced data intricacy.
  - Mastered the integration of standalone SQL queries within a Python environment, leveraging the Streamlit library to render a fully-functional website enabling diverse data record queries.
  - Successfully delivered a user-centric platform allowing comprehensive queries on records such as case details, client data, billing particulars, and documents, meeting all project KPIs and exemplifying proficiency in semester-long group-work dynamics.
- **Interactive Chatbox Feature Design for a Language-Learning App (Figma)** **Nov - Dec 2022**
  - Developed an innovative chatbox feature, focusing on enhancing user engagement for a language-learning platform using Figma, showcasing a comprehensive interactive prototype.
  - Demonstrated proficiency in interaction design and user experience design, emphasizing key principles like affordances, signifiers, and constraints, while ensuring desirability, feasibility, and viability of the feature.
  - Navigated challenges in ideation to improve the existing application and mastered Figma for prototyping, culminating in a timely project completion and attaining a perfect score based on project KPIs and professor feedback.