Julia Epshtein

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EDUCATION

University of Massachusetts Amherst Honors College **Amherst, MA**
B.S. in Computer Science and Mathematics double major **Expected May 2025**
Awards: Dean's List (All semesters), CICS Dean's Merit Scholarship (2022)

COURSEWORK

- Algorithms
- Data Structures
- Machine Learning
- Software Engineering
- Database Management
- Programming Methodology
- Statistics
- Discrete Math
- Linear Algebra
- Multivariate Calculus
- Abstract Algebra
- Computer Systems Principles

SKILLS

Languages: Javascript, Typescript, Java, Python, C/C++, SQL, HTML/CSS
Developer Tools & Libraries: GitHub, Git, React, Tailwind, Jupyter, Google Colab, Notion, Confluence
Frameworks/Libraries: NumPy, Pandas, SciPy, Sci-Kit Learn

EXPERIENCE

The Kale Project, Summer 2023
Research Intern, UC San Diego, CA

- Work in a team of graduate students on the Kale Project, a research initiative focused on enhancing spreadsheet safety and enabling data scientists to effectively use spreadsheets in their analysis work
- Implement a feature that allows users to assign custom names to cells and reference them through formulas
- Developed a Widget for Jupyter Notebook using Typescript, React, HTML, and CSS for front-end development and leveraged the Ag-Grid API for back-end functionality and rendering of spreadsheet cells

Advanced Learning Technologies Laboratory, Sept. 2022 – May 2023
Wearable Learning (WL) Undergraduate Researcher, Amherst, MA

- Extracted data from student-designed games in the WL database to analyze and evaluate gameplay processes, game creation methods, and the development of computational thinking skills
- Applied BERT, a powerful multi-label text classification model, to extract keywords and analyze the features of student-designed games for insights into user behavior and game design trends

Manning College of Information and Computer Sciences, Sept 2022 – Present
Undergraduate Course Assistant, Amherst, MA

- Graded 250+ homework assignments and exams on a weekly basis
- Taught 50-person discussion sections in Python to reinforce programming concepts
- Held weekly office hours to perform code review for students and provide feedback and direction in the course

Russian School of Math, November 2018 – Present
Mathematics Tutor, Newton, MA

- Tutored students in grades K-12 and led interactive group workshops to prep students for math SAT exams
- Created customized lesson plans for private tutoring sessions, tailored instructions to meet the unique needs and learning styles of individual students

PROJECTS & RESEARCH

Liver Patient Prediction **August 2022**

- Classified patients based on whether they have liver disease given chemical compositions in their bloodstream
- Normalized the data using standard scaling and employed Synthetic Minority Over-sampling Technique (SMOTE) to handle imbalanced classes
- Implemented a Random Forest Classifier, resulting in an 86% accuracy on the test dataset. Additionally, applied KNearest Neighbors, Decision Trees, and Logistic Regression models to classify the data