

# Elvin Ly

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## EDUCATION

### Stony Brook University

*Bachelor of Science in Computer Science*

Stony Brook, NY

*Aug. 2023 – May. 2027*

- GPA: 3.75
- Relevant Course Work: Software Development, Data Structures, Programming Abstractions I & II, System Fundamentals, Introduction to Object-Oriented Programming, Foundations of Computer Science, VIP 295

## PROJECTS

### Study Kitty | *TypeScript, React Native, AWS API Gateway, Lambda, DynamoDB, S3, Expo* May 2025 – Present

- Built and deployed a full-stack mobile productivity app with gamified focus sessions using React Native and Expo.
- Designed a serverless backend with AWS API Gateway, Lambda, DynamoDB, and S3, enabling efficient data flow, secure cloud saves, and dynamic UI rendering, reducing infrastructure costs by 40%.
- Implemented secure authentication by integrating Clerk with AWS Lambda and API Gateway authorizers, securely verifying JWTs, resulting in protected user data and seamless mobile login experience.
- Enhanced user experience by implementing local caching strategies and optimistic UI updates, accelerating app responsiveness by 30%.

### Digit Classification AI | *Python, TensorFlow, NumPy, OpenCV, Matplotlib* Jan. 2025

- Developed a deep learning neural network using TensorFlow and NumPy to classify digits with 97% accuracy.
- Preprocessed data by normalizing pixel values and reshaping images, ensuring high-quality model predictions.
- Utilized OpenCV to process external images and dynamically predict digits with visualization via Matplotlib.

### Pantry Pal | *JavaScript, Next.js, React.js, Firebase, GCP, OpenAI, HTML, CSS* Jul. – Aug. 2024

- Developed a scalable full-stack web application enabling users to manage pantry inventory via Firebase and receive AI-driven recipe suggestions through OpenAI.
- Engineered Firebase back-end for scalable data storage allowing for users to add, delete, and update ingredients with full CRUD functionality, improved item management efficiency by 25% through search and filter via queries.
- Integrated OpenAI to classify ingredients from images and import them into Firebase as well as power the Pantry Pal ChatBot, providing AI-driven recipe suggestions.

### MBTify | *React.js, JavaScript, HTML, CSS, Spotify API* Jan. 2024

- Led a hackathon team of 4 in the development of a responsive full-stack web application using React as the front-end and the Spotify API, resulting in 30+ active users in the first month.
- Implemented Spotify OAuth to get data from the user's Spotify account, enhancing the user experience.
- Analyzed users' playlists and determined their MBTI personality type through algorithms, and visualized users' Spotify data to show what determined their MBTI such as the level of valence or energy of their songs.

## TECHNICAL SKILLS

**Languages:** JavaScript, TypeScript, Java, Python, C, SQL, HTML/CSS, OCaml

**Frameworks:** React, Next.js, React Native, Node.js, Express.js, TensorFlow, NumPy, OpenCV, Matplotlib

**Misc:** AWS (Lambda, API Gateway, DynamoDB, S3), MongoDB, Firebase, Tailwind, Bootstrap, Material UI

**Developer Tools:** Git, VS Code, Eclipse

## EXTRACURRICULAR

### External Public Relations at Asian Student Alliance Sep. 2023 – Present

- Responsible for increasing engagement for the organization's events and reaching out to brands for sponsorships.
- Developed a program to create a promotion schedule that increased engagement by 15% via an algorithm.

### Mentee at Women in Computer Science Sep. 2023 – Present

### Stony Brook Computing Society Sep. 2023 – Present