Grace Shum

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EDUCATION

Northwestern University   **Expected Jun. 2027**
Bachelor of Arts in Computer Science, Minor in Business Institutions, Art Theory & Practice   *Evanston, IL*

- **Cumulative GPA:** 3.86/4.00 | **Dean's List:** 6/6
- **Relevant Coursework:** Data Structures & Algorithms, Computer Systems, Operating Systems, Machine Learning, Artificial Intelligence, Parallel Computing, Scalable Software Architecture, Linear Algebra, Probability & Statistics
- **Organizations:** The Garage, Design + Innovate for Social Change, Women in Computing, Illustrators & Animators Club

EXPERIENCE

Hubbell - Aclara   **Jun. 2025 − Present**
Product Development Engineering Intern   *Solon, OH*

- Developed end-to-end applications using **Python**, including a **Tkinter** GUI to retrieve, parse, and upload utility meter datalogs to **InfluxDB**, and a **Dash/Plotly** dashboard using **Pandas** to visualize and analyze data, supporting a large-scale testing system
- Streamlined the development workflow for continuous integration, delivery, and automated test execution, reducing manual intervention by 73% and enabling faster, more consistent delivery of application updates by utilizing **Azure Pipelines**
- Ensured timely and organized feature delivery by coordinating daily stand-ups and biweekly sprints within an **Agile** development cycle, leveraging **Azure DevOps** to manage tasks, track team progress, and facilitate cross-functional coordination

SOCO Startup   **Jan. 2025 − Present**
Software Engineer Team Lead   *Evanston, IL*

- Led a student startup software team at The Garage at Northwestern, developing a physical-digital companion comprising of a robotic stand and mobile app that work together to capture candid photos of meaningful and interpersonal moments
- Enhanced photo-taking accuracy by 42% by implementing adaptive zoom behavior, event-driven noise spike detection, photo filtering, and in-app photo album deletion using **React Native**, **TypeScript**, **Expo FileSystem**, and **TestFlight**
- Drove cross-functional collaboration between software, hardware, and product teams by coordinating weekly sprints, stand-ups, and sub-team meetings using **Linear** and applying **Agile** methodology to ensure seamless integration of app features with hardware

Cleveland Clinic   **Jun. 2024 − Sep. 2024**
Data Science and Finance Analyst Intern   *Cleveland, OH*

- Improved billing prediction accuracy by 34% by developing data queries with **SAS**, **Teradata**, and **SQL** to classify patient payment behavior and creating dashboards with **Tableau** and **Excel** to drive data analysis and support stakeholder communication
- Enhanced data accessibility and user experience by redesigning and refactoring the data science team website using **HTML**, **CSS**, and **JavaScript**, optimizing Tableau dashboard integration, centralizing analytics resources, and improving layout responsiveness
- Strengthened team efficiency and cross-division collaboration by managing project workflows, delivering weekly progress reports, and leading presentations to finance department executives and interns, improving communication and alignment across departments

PROJECTS

Books and Breakfast App   **Jan. 2024 − Jun. 2024**

- Streamlined volunteer onboarding and boosted new volunteer retention by 63% for an education non-profit by centralizing organization information, rideshare matching, and chat functionality on a mobile app, improving organizational coordination
- Collaboratively planned and built **React Native TypeScript** app using **Figma** for mockups and **Expo Go** for testing. Elevated app performance by incorporating **Firebase Realtime Database** to store data securely, speed up retrieval, and reduce server load

Personal Website   **Jun. 2024 − Jul. 2024**

- Developed a personal website featuring a navigation bar, homepage, about me and portfolio section, and footer, incorporating advanced animations and interactive elements using **React** and **JavaScript** for logic and **Figma** and **CSS** for styling
- Improved website responsiveness and user experience across devices by implementing media queries and custom CSS styling to ensure consistent display and smooth functionality on both laptops and mobile screens of various sizes

Prelude Planner App   **Jun. 2024 − Sep. 2024**

- Spearheaded development of a studio assistant app for Northwestern's Bienen School of Music to enhance scheduling efficiency by 44% with greedy graph coloring using **Python** scripts for backend data processing and **MongoDB** for schedule data storage
- Led a team of four to deliver a mobile app by forecasting project timelines, driving efficient workflows, and fostering cohesive collaboration, while independently developing calendar and lesson availability features using **React Native** and **JavaScript**

TECHNICAL SKILLS

Languages: Python, C, C++, C#, JavaScript, TypeScript, Java, SQL, HTML, CSS, Racket
Frameworks/Libraries: React, React Native, Node.js, NumPy, Pandas, Plotly, Dash, Tkinter, Unity, Expo
Infrastructure: Teradata, Tableau, SAS, Firebase, InfluxDB, MongoDB, Git, Docker, AWS, Azure DevOps, CI/CD
Certifications: Girls Who Code – JavaScript & HTML & CSS Accreditation