

# Raymond Bian

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## Education

<b>Georgia Institute of Technology</b> <i>Bachelor of Science in Computer Science (GPA: 4.00 / 4.00)</i> <ul style="list-style-type: none"><li>• <b>Relevant Coursework:</b> Data Structures and Algorithms (Java), Honors Algorithms, Combinatorial Analysis, Probability Theory, Computer Organization (LC3 ASM).</li></ul>	Expected December 2025 Atlanta, Georgia
<b>Harvard University Extension School</b> <i>Online Math Dual Enrollment (GPA: 3.84 / 4.00)</i>	August 2022 - May 2023
<b>University of Illinois Urbana Champaign</b> <i>Online NetMath Program (GPA: 4.00 / 4.00)</i>	August 2021 - May 2022

## Experience

<b>Dalian Mother's English Consulting Co.</b> <i>Software Engineer/Project Manager</i> <ul style="list-style-type: none"><li>• Developed a web app to store volunteer hours and training information for 50+ users in an accessible database.</li><li>• Spearheaded weekly meetings; coordinating design, layout, and functionality of 20+ pages.</li><li>• Utilized Python, FastAPI, and MySQL to implement a REST API for the back-end; React.js for a responsive and user-friendly front-end.</li></ul>	May 2022 - Dec 2023 Dalian, China
<b>Epoch Technologies Dalian, Co. Ltd.</b> <i>Business English Teacher</i> <ul style="list-style-type: none"><li>• Taught business English lessons twice weekly to 25 workforce professionals.</li><li>• Created lesson plans, interactive activities, and engaging assignments to foster use of English.</li><li>• Developed communication skills in a professional workforce environment across language barriers.</li></ul>	June 2021 - September 2021 Dalian China

## Projects

<b>Graphscii Graph Visualizer</b>   <i>Networkx, Python, React.js</i> <ul style="list-style-type: none"><li>• Implemented an orthogonal graph drawing framework with the Topology-Shape-Metrics approach, allowing users to display graphs in the terminal.</li><li>• Utilized network flow algorithms and MILP solvers to minimize edge crossings, bends, and total layout area.</li><li>• Developed a front-end and API for online demo use and documentation.</li></ul>
<b>Dance Choreography AI</b>   <i>PyTorch, OpenCV, Flask, React</i> <ul style="list-style-type: none"><li>• Developed a Multi Object Tracking-based app to automate choreography analysis using React and Flask.</li><li>• Created multi-object detection and tracking data pipelines using Pytorch to extract dance formations.</li><li>• Converted object-tracking data to bird's eye view using OpenCV and Geometric Image Transformation.</li></ul>
<b>LoL Cooldown Tracker</b>   <i>C++, ImGui, Ghidra, ReClass</i> <ul style="list-style-type: none"><li>• Utilized Ghidra to analyze dumped game binaries, ReClass to scan memory realtime to reverse engineer and locate offsets of camera matrices, ability cooldowns, and object manager trees in memory.</li><li>• Developed user-friendly interactive menu and efficient overlay with ImGui.</li></ul>
<b>USACO Checklist App</b>   <i>HTML, CSS, Python, Postman, SQL, Jekyll</i> <ul style="list-style-type: none"><li>• Developed web application utilizing a REST API and an ORM to store and track progress on 500+ USACO problems.</li><li>• Reverse engineered USACO server requests with Postman, wrote web scraper to sync problem progress.</li><li>• Built JSON web token authentication system and user accounts to enable list sharing and sync between devices.</li></ul>

## Technical Skills

**Languages:** Javascript, C++, Python, Java, Rust, SQL  
**Technologies:** React.js, Node.js, Flask, FastAPI, PyTorch, jQuery, Bootstrap, Postman, GH Actions, NetworkX, ImGui,  $\text{\LaTeX}$   
**Concepts:** Data Structures, Authentication, API, Algorithms, Probability  
**Languages:** English (fluent), Chinese (conversational)