

# Edward Chen

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## EDUCATION

### **Stony Brook University (SUNY)**

*Bachelor of Science in Computer Science | Applied Mathematics and Statistics*

**Stony Brook, NY**

*Aug. 2021 – May 2025*

**Relevant Coursework:** Software Engineering, Data Structures, Analysis of Algorithms, Object Oriented Programming, Machine Learning, Data Science, Numerical Analysis, Computational Geometry

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, Java, C, HTML, CSS, R

**Frameworks/Libraries:** React.js, Node.js, Express.js, Flask, FastAPI, Material-UI

**Developer Tools:** Git, GitHub, Gitlab, VS Code, VIM, Docker, Office 365

**Databases:** MongoDB, DynamoDB, Firebase, PostgreSQL

**Interests:** Powerlifting, Basketball, Diving

## PROJECTS

### **Weather Tracker** | *Flask, JavaScript, PostgreSQL, OpenMeteo*

**July 2025 – Aug. 2025**

- Deployed a full-stack weather application serving 7-day forecasts and historical climate data to 100+ users, using Flask with PostgreSQL for location management
- Engineered RESTful API integration with OpenMeteo for real-time weather data, reducing average response time by 60% through data processing optimization
- Developed responsive dashboard displaying 168+ hourly data points per forecast cycle, featuring interactive visualizations and historical monthly weather comparisons

### **Basketball Analytics Dashboard** | *React, Node.js, LightGBM, MongoDB*

**June 2025 – Aug. 2025**

- Launched a MERN-based web platform featuring 400+ NBA player statistics, interactive leaderboards, and dynamic data visualization components
- Built comprehensive data visualization features to support user-defined statistical formulas and metrics
- Integrated a machine learning pipeline using LightGBM achieving 85% prediction accuracy on player performance forecasts with custom feature engineering
- Enhanced user engagement by 40% through interactive player comparisons and drill-down capabilities, reducing average session bounce rate

### **Automated Process Manager** | *JWT, Socket.IO, Cron, MongoDB*

**March 2024 – May 2024**

- Built a full-stack web application managing 300+ user accounts with real-time resource allocation, room scheduling, and automated roster management
- Automated operational workflows reducing manual processing time by 70% through MongoDB query optimizations and customized cron job scheduling
- Designed modular architecture supporting 5+ business sectors with 90% code reusability using agile development practices
- Implemented JWT authentication with role-based access control and Bcrypt encryption, securing 300+ daily user sessions
- Integrated Socket.IO for real-time notifications and messaging, enabling instant updates across 50+ concurrent users

## EXPERIENCE

### **IT Operations Specialist**

**Aug. 2022 – May 2025**

*Stony Brook Campus Residences*

*Stony Brook, NY*

- Provided technical support during events for 200+ students across campus facilities
- Coordinated logistical arrangements and managed Brightspace, Echo360 and audiovisual system operations
- Maintained reliable performance of classroom technology and computers for daily use and events
- Monitored network performance and system health across campus facilities, ensuring 98% uptime for IT infrastructure

### **Teaching Assistant**

**Aug. 2023 – Dec. 2023**

*Stony Brook University*

*Stony Brook, NY*

- Instructed laboratory sessions for 30+ students covering Java programming fundamentals, recursion, and polymorphism concepts
- Managed Piazza Q&A platform responding to 100+ student inquiries, providing comprehensive course support and assistance
- Facilitated exam administration and grading procedures in collaboration with the professor to maintain academic standards