

# Kinshu Gupta

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## EDUCATION

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### Quinnipiac University

Majors: Computer Science, Data Science; Minor: Finance (CGPA: 3.99)

Hamden, Connecticut

Aug 2021 – May 2025 (Expected)

## WORK EXPERIENCE

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### International Game Technology

Providence, Rhode Island

Software Architecture Intern

Jun 2023 – Present

- Built casino floor game session data generator PoC with multithreading to simulate 50,000+ Electronic Gaming Machines (EGMs) for casino floors
- Developed real-time casino transaction processor utilizing Drools rule engine for complex event processing of player session data from EGMs and provide intelligent offering feedback to maximize player engagement and retention
- Stress tested by monitoring CPU load and memory of TXP hosted on EC2 instance by running upto 50,000 concurrent EGM sessions with player session data subscribed from RabbitMQ
- Performed integration testing for EGM simulator, TXP, database, and AWS SageMaker machine learning endpoint
- Identified critical issues while documenting Airflow ingestion tasks that processes unstructured player session data for use in Snowflake data warehouse

### QU Office of Academic Innovation & Effectiveness

Hamden, Connecticut

Research Assistant

Sep 2022 – May 2023

- Co-author of longitudinal cohort study analyzing and building predictive model revealing impact of student psychoeducational variables on quantitative literacy and written communication scores (in progress)
- Consolidated multi-decade, cross-university longitudinal study data from 25,000+ students using NumPy, Pandas, TensorFlow and Sentence Transformer models for Natural Language Processing
- Accelerated data cleaning pipeline by automation using Python and Selenium, achieving 30x faster processing; slashed 300 annual work hours to under 10

## EXTRACURRICULARS & PROJECTS

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### Quinnipiac Computing Club | President

- Led and organized 2022 hackathon, securing M&T Bank sponsorship & managing a 50+ member club budget
- Won first-place 2021 Hackathon team prize as general member by building Python, React.js web app to visually plan nutrition intake, utilizing publicly available data and guidelines set by the World Health Organization

### Democracy Front | Co-Founder

- Developed political fundraising app to successfully qualify for 2nd round pitch to Pear Venture Capital at Harvard delivering legislature info + enabling grassroots donor contributions to candidates, political parties, PACs or NGOs

### Athena Surveillance Object Detection | <http://athena.kinshug.com>

- Built surveillance analytics system to scrape live feeds with applications in real estate, hospitality, and retail
- Integrated YOLOv5 model via PyTorch API for object detection; stored events in PostgreSQL on Amazon RDS
- Developed RESTful Flask API and React-based frontend, both hosted on EC2 instances, for interactive data querying and live display; used AWS Lambda for scraping and S3 for storage

### Stock Network Analysis | <https://stock-network-analysis.herokuapp.com>

- Developed tool to diversify investment portfolios based on graph centrality measures
- Visualized correlation graph in Fruchterman-Reingold layout by using Python, Plotly, and HTML/CSS, deployed using Heroku CI/CD

### Rocky Hill High School Robotics Club | Lead Programmer

- Competed at Connecticut VEX Robotics Competition for a chance to qualify for New England championships

### Amazon Alexa Hackathon | Participant

- Won prize for successfully building & deploying voice assistant app to quiz and review STEM topics, utilized Node.js, AWS services, and passed Alexa store launch requirements

## SKILLS

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**Programming** Python, Java, JavaScript, C, R, SQL

**Technologies** Arduino, Raspberry Pi, Git, Selenium, React

**Certifications** TensorFlow Machine Learning, AWS Developer Associate