

# Horace Liu

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## EXPERIENCE

### Interactive Brokers Group

Greenwich, CT

Software Engineer Intern (DevOps Team)

June 2021 – Aug. 2021

- Engineered an internal code search engine and implemented “git blame” and Kafka alerts in Python
  - Wrapped as an image through Podman and managed by utilizing the Kubernetes DevOps cluster
- Indexed 8K+ repositories and 500K+ files into Elasticsearch from Gerrit REST API and Python
- Created a REST service, exposing a PL/SQL function to retrieve stock data in Java Spring MVC
- Exposed vital flaws in IBKR’s proxy server design after using 2M+ requests to continuously crash them

### Stony Brook University (LUNR Lab)

Stony Brook, NY

NLP Research Assistant

Feb. 2021 – present

- Assisted Yash Lal with NLP Ph.D. research into why question answering and dataset creation
- Extracted and found correlations for 31K+ entries between human and automatic metrics in Python
- Developed classification task between implicit and explicit questions, increased answer accuracy by 5%
- Executed Slurm commands to test and finetune models such as HuggingFace’s T5, ConceptNet, etc.

### Investment Club at Stony Brook

Stony Brook, NY

Vice President

June 2020 – present

- Collaboratively hosted a job fair networking event involving 23 employers and 88 students/alumni
- Bestowed over 60 members (50% increase) with lectures, competitions, and guest speakers
- Created Buffett’s Summit competition from React.js; resulted in positive reviews from 95% of members
- Managed general body meetings, website overhauls/management, SEO, and external collaborations

## EDUCATION

### Stony Brook University

Stony Brook, NY

Bachelor of Science in Computer Science and Economics

Expected Graduation May 2023

- GPA: 3.9; Dean’s List; University Scholars Program
- Teaching Assistant for ECO 108: Introduction to Economics
- Winner of the HackHealth 2021 hackathon in Social Good with 206 participants and 43 teams

## PROJECTS

### Spark App ([linktr.ee/usesparkapp](https://linktr.ee/usesparkapp))

June 2021 – present

- Devised product and led a team of 3 engineers and 1 designer using Agile development methodology
- Administered A/B testing and monitored app metrics, utilized results to increase user satisfaction by 30%
- Engineered product roadmap, modularized React Native front end, and implemented Firebase functions
- Spearheaded app launch (App Store/Google Play) and marketing to over 14K students and 350 users

### Bitcoin Time Series Predictor ([git.io/JLQ42](https://git.io/JLQ42))

Dec. 2020

- Utilized LSTM, Prophet, and ARIMA models within Python to predict the price of Bitcoin
  - Designed as a teaching tool for a lecture series in algorithmic trading for Investment Club
- Employed NumPy, Pandas, Keras, Matplotlib, TensorFlow, and Scikit-learn in Jupyter Notebook

Other projects: [buffetts-summit.com](https://buffetts-summit.com) (Jan. 2021); [reinvest.life](https://reinvest.life) (Dec. 2020); [covidlivedash.tech](https://covidlivedash.tech) (Sept. 2020)

## SKILLS

**Technical Languages:** Java; Python; JavaScript; TypeScript; HTML/CSS; SQL; R

**JS Frameworks:** React; Express; Node; React Native; Bootstrap; Axios; GraphQL

**Python Libraries:** NumPy; Pandas; Matplotlib; Seaborn; TensorFlow; Scikit-learn; PyTorch

**Databases/Tools:** Firebase; MongoDB; MySQL; ELK stack; Kubernetes; Podman; Docker

**Languages:** Fluent in English; Conversational Proficiency in Mandarin and French