# Jack C. Yeung

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## EDUCATION

**Indiana University - Bloomington** **August 2024 - May 2026**
*Master of Science in Data Science, Applied Data Science in Economic Analysis*

**Indiana University - Bloomington** **August 2020 - July 2024**
*Bachelor of Science in Informatics, Minor in Psychology*

**Relevant Coursework:** Machine Learning, Applied Machine Learning, Applied Algorithms, Engineering Cloud Computing, Performance Analytics, Network Science, Information Infrastructure, Information Representation

## TECHNICAL SKILLS

- **Programming Languages:** Python, SQL, Shell, HTML5/CSS, Git
- **Frameworks:** Pandas, Network X, NumPy, SciKit Learn, Flask, SciPy, Scrapy, Selenium, BeautifulSoup, GeoPandas, Pytest, Matplotlib, Seaborn

## PROJECTS

**Undergraduate Senior Thesis on Hyper-Graph Ranking Algorithm** **May 2024 - Present**
- Generalized a faster iterative scheme in ranking competitive higher order interactions alongside Professor Filippo Radicchi
- Evaluated the predictive performances of the developed model through intensive experiments against pre-existing graph based ranking approaches, demonstrating a quicker convergence and improved efficiency
- Co-authored a paper detailing the methodology and findings, currently in preparation for submission to a peer-reviewed journal

**Machine Learning Algorithm On Real World Apartment Data** **March 2024 - August 2024**
- Employed advanced web scraping techniques with Scrapy to gather real estate data across 16 cities, encompassing 23,000 apartment complexes and over 300,000 individual units
- Conducted exploratory data analysis and visualization using GeoPandas to identify neighborhood price trends and applied K-Means clustering for pattern discovery
- Analyzed apartment amenity text data using TF-IDF and developed predictive pricing models, optimizing and comparing the performance of XGBoost and TensorFlow neural networks to accurately predict the price of apartments

**Equipment Rental Interface** **January 2024 - May 2024**
- Developed full-stack equipment rental management system for streamlined inventory management using Flask, HTML, and SQL
- Created a user-friendly front-end interface with Bootstrap for managing and updating equipment details
- Integrated a SQL & Python back-end to facilitate efficient data storage, real-time updates, and seamless retrieval of rental information

**Complex Network Analysis on Professional Golf Players** **September 2023 - December 2023**
- Developed a Python model to analyze group dynamics in PGA golfer performance, focusing on the impact of pairings for team-based events such as the Ryder Cup
- Leveraged Selenium for automated data scraping, streamlined data processing with Pandas, and performed statistical analysis utilizing SciPy
- Created visualizations with NetworkX, Gephi, and Matplotlib to effectively communicate insights and relationships to a diverse audience

## EXPERIENCE

**Center for Complex Networks and Systems Research(CNetS)** **June 2023 - Present**
*Research Assistant* *Bloomington, IN*
- Extracted and analyzed large datasets by developing web scraping scripts and utilizing Pandas for efficient processing
- Modeled and analyzed complex relationships using NetworkX, applying algorithms inspired by existing research literature
- Contributed to a team project through GitHub, with weekly meetings to share progress updates

**Polo Fields Golf & Country Club** **August 2019 - August 2020**
*Golf Cart Attendant* *Ann Arbor, MI*
- Engaged closely with customers, monitoring their needs to deliver an exceptional experience.
- Assisted in preparing the course for events and tournaments as part of a small team of five