IRITH CHATURVEDI

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EDUCATION

University of Illinois Urbana Champaign ***(August 2022 — May 2026)***

Bachelor of Science in Information Science + Data Science, Minor in Computer Science and Statistics.

GPA — 4.0, James Honor's Scholar 2022/23/24, Dean's List 2022/23/24

INFORMATION TECHNOLOGY SKILLS:

- ✓ Microsoft Office Suite
- ✓ Python (Pandas, NumPy)
- ✓ PyTorch (Machine Learning, NN)
- ✓ MySQL (RDBMS)
- ✓ Sci-Kit Learn (Machine Learning Algorithms)
- ✓ Supervised and Unsupervised learning algorithms
- ✓ C++ and Java
- ✓ R (Statistical Analysis, Interactive Dashboards)
- ✓ Seaborn, MATLAB and Matplotlib
- ✓ RESTful API, Amazon Web Services (AWS), Orange (Analytical workflow management)
- ✓ Snakemake and Nextflow (Workflow automation)
- ✓ Tableau, Vega, Streamlit, Altair

WORK EXPERIENCE

Course Assistant, (STAT 420) Department of Statistics, UIUC ***(Champaign, IL: January 2025 - Present)***

- Evaluated and graded weekly assignments and Midterm exams for over 100 students. Conducted weekly office hours to guide students through the material taught in the course and homework problems.
- Collaborated with the instructor, TA and fellow CAs in weekly meetings to discuss grading strategies, and course structure.

Undergraduate Researcher, Biodiversity Genomics Lab at UIUC ***(Champaign, IL: August 2023 - Present)***

- Projects: Reconstructing Evolution and the Tree of Life (in Fishes); Understanding the evolutionary relationships between species and genome duplications under Dr. Milton Tan (Research Scientist at Prairie Research Institute).
- Workflow Automation and Computational Optimization: Automated the CAPTUS pipeline for Cyprinid species assembly using Nextflow, streamlining data modifications and renaming processes. (41 species of the Cyprinid family)
  Optimized IQ-TREE phylogenetic analysis using Python-based parallelization, significantly reducing processing time by 60%.
- Data Analysis and Redundancy Resolution: Identified over 19,000 unique loci through advanced feature filtering and statistical analysis with R, enhancing the quality of evolutionary insights.
- Addressed reference paralog redundancy by implementing a weighted scoring system, improving alignment accuracy by 94%.

Intern, 21st Century Dads Foundation (***Chicago, IL: June - August 2023 and May - August 2024)***

- Used Python Data Science libraries to perform Grant Research with the help of Foundation Directory Online and Trello to identify and analyze 15 potential funders and grantmaking foundations.
- Developing and designing the 21st Century Dads Mobile Application with the help of SUBSPLASH. The application will command a user base of over 1000 families.
- Developed promotional strategies via social media platforms to attract prospective members and strengthen recruitment efforts.
- Raised a total of $120,000 for marketing and advertising from a single Grant Maker. Also helped raise $75,000 for the 21st Century Dads Foundation and the Illinois Fatherhood Initiative as a part of the "Dads Honor Ride" team at the Race Across America event.

EXTRACURRICULAR ACTIVITIES

Theta Xi National Fraternity (Alpha Beta Chapter), Executive Board ***(April 2023 - Present)***

- Played a key role in planning and organizing the Speaker Series featuring industry leaders, leveraging partnerships with RSOs and academic departments to maximize outreach, attendance and recruitment.
- Developed and implemented a strategic three-step plan to enhance chapter academic performance, increasing the average semester GPA of active members from 2.8 to 3.3.

Notable Projects using Python, MySQL and Material Design Software

- Analyzed the impact of COVID-19 on U.S. pharmaceutical stock prices by integrating and cleaning datasets from the Alpha Vantage API and Johns Hopkins University, leveraging Python, SQL, and OpenRefine for data processing, and automating workflows using Snakemake.
- Designed a machine learning model to identify affordable housing options in U.S. Northeast, integrating spatial visualizations and predictive analytics to recommend neighborhoods and properties based on family size, budget, and proximity to schools.
- Image recognition program using PyTorch, deciphers alphabets, numbers and objects using a CNN with 98.5% accuracy.

VOLUNTEER EXPERIENCE

Habitat for Humanity International (Non-Profit NGO)

Helped construct multiple homes for first time buyers in CU; helped raise money for those affected by the COVID pandemic in India.

HOBBIES AND INTERESTS

Singing, Reading, Travelling (Have been to over 40 countries), Soccer, Dancing, Running, History