

Karan Bhanot

Email: bhanotkaran22@gmail.com | LinkedIn: <https://www.linkedin.com/in/bhanotkaran22>

WORK EXPERIENCE

Rensselaer Polytechnic Institute

Troy, New York

Project Lead

Jan 2022 – Aug 2023

- Spearheaded the end-to-end development of a Python framework with modular, extendable, and maintainable code, improving the process of Machine Learning algorithm fairness evaluation across 81 data scenarios by 60%.
- Authored a successful two-year grant of \$400,000 funding for research and development with IBM, facilitating architecture design, software development, and research dissemination for robust and responsible AI applications.
- Published 5 first-author papers on synthetic data, fairness, and responsible AI at top-tier conferences/journals including Entropy, ESANN, AIES, AMIA, contributing to knowledge advancement and receiving reviewer invitations to 6 AI conferences and journals.
- Collaborated with academic and industry ML engineers, researchers, and experts to identify and integrate open-source libraries, reducing overall development time by 80%.

Rensselaer Polytechnic Institute

Troy, New York

Graduate Research Assistant

Aug 2019 – Aug 2023

- Collaborated with cross-functional teams in data science, privacy, and fairness for developing 4 software applications, managing 40% of the development cycle including performing ML experiments, and developing prediction models.
- Analyzed large-scale private Electronic Healthcare Records (EHRs) data on secure cloud servers for statistical analysis, exploratory data analysis, ML model training, and data visualization of 300,000 records and 100 features.
- Managed a team of 30 students for the development, deployment and monitoring of the award-winning MortalityMinder web application, earning the third-position prize of \$15,000.
- Mentored 50 students on programming language fundamentals, code design, code maintenance, and comprehensive documentation, resulting in a 30% decrease in code-related issues across 6 months.
- Performed data collection, feature engineering, exploratory data analysis, and data aggregation of multiple datasets, facilitating access to real-world data for 120 students for projects and research.

IBM

Yorktown Heights, New York

AI Fairness Research Extern

May 2021 – Aug 2021

- Created two comprehensive datasets after data aggregation of 20 CSV files to evaluate bias of ML models, identifying variability of 20% across multiple experiments.
- Summarized findings from 30 articles on AI ethics and fairness, informing decision-making processes within the team.
- Contributed actively to weekly team meetings by presenting research findings, proposing innovative solutions to mitigate bias, and fostering collaboration among team members.

Cvent

Gurugram, India

Software Engineer

Jun 2018 – Jul 2019

- Developed and implemented 100 new features for the Appointments product, resulting in a 20% increase in product functionality.
- Collaborated with 4 cross-functional teams in agile development, ensuring seamless integration of new features into the software.
- Conducted thorough code reviews, resulting in a 40% decrease in bugs and improved overall code quality.
- Engaged in 50 community-building sessions, fostering collaboration across 5 departments for analyzing business needs.

EDUCATION

Rensselaer Polytechnic Institute

Troy, New York

Doctor of Philosophy (Ph.D.) in Computer Science (CGPA: 4.0)

Graduation Date: Aug 2023

Rensselaer Polytechnic Institute

Troy, New York

Master of Science (MS) in Computer Science (CGPA: 4.0)

Graduation Date: May 2021

SKILLS

Python, R, JavaScript (JS), React, CSS, HTML, Java, Flask, SQL, Git, AWS, Azure, NumPy, Pandas, Scikit-learn (Sklearn), Seaborn, Matplotlib, R Shiny, Leaflet, GeoPandas, JSON, REST API, Jira