JENNIFER KAVA

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EDUCATION

Columbia University (GPA: 3.9/4.0)   *Jan 2025 – Present*

Bachelor's Degree, Applied Mathematics and Computer Science

Activities: Dean's List (all semesters), Columbia Society of Women Engineers

Relevant coursework: Calculus-Based Statistics, Ordinary Differential Equations, Linear Algebra, Symbolic Logic

Columbia University *(Visiting Student)*   *Jun 2024 – Dec 2024*

Visiting Student Program in Economics, Finance and Data Analytics

Activities: Dean's List, SPS Student Ambassador

Relevant coursework: Intermediate Microeconomics, Introduction to Econometrics, Game Theory, Corporate Finance

WORK EXPERIENCE

Department of Statistics, Columbia University   *Nov 2025 – Present*

Research Assistant working with Prof. Chenyang Zhong   New York, NY

- Pursuing a new research project at the intersection of causal inference and diffusion models, performed extensive literature reviews and proposed new research ideas.
- Building theoretical foundation by carrying out proofs and implementing algorithms for experimental validation.

Department of Civil Engineering and Engineering Mechanics, Columbia University *Sep 2025 – Present*

Research Assistant working with PhD student   New York, NY

- Third author paper submitted to a machine learning conference.
- Reviewed and synthesized research on diffusion probabilistic models and generative modeling, engaged with mathematical foundations of diffusion models, including Fourier transforms, Markov processes and variational inference via KL-divergence minimization to support ongoing research directions.
- Assisted graduate students on meeting documentation and project coordination, ensuring smooth collaboration.

Transportation Data Science Project   *Jan 2025 – Feb 2025*

Project Participant   Remote

- Applied geospatial visualization, spatio-temporal regional data analysis on NYC motor vehicle collision dataset to identify high-risk zones, time-based trends, additional contributing factors to road safety of vulnerable road users.
- Conducted time series analysis and decomposition to review trends, seasonality, residuals, and anomalies, including the impact of COVID-19 on collision frequency and developed data-based economics and psychological explanations behind observed trends in data.

Faculty of Economics, Cambridge University   *May 2024 – Sep 2024*

Research Assistant working with Dr. Daniele Cassese   Remote

- Conducted simulations and wrote literature review on game theory to help develop a potential approach for the basic framework of a research paper on team-based peer learning methods and learning outcomes.
- Searched academic databases for papers on cooperative learning, peer effects and educational interventions, summarized findings from prior research to help build the paper's literature review.
- Assisted with data synthesis and descriptive statistics using LaTeX, ensuring clean and accurate presentation.

Mirae Asset Securities   *Nov 2022 – Nov 2023*

Equity Research Intern, ex-Corporate Social Responsibility Team

- Drafted regular market updates, coverage reports, presentations based on corporate news, industry development, market research and economic indicators to translate complex data insights to actionable strategies.
- Updated MySQL database following IPOs, earnings calls, corporate news to support research insights.

ACHIEVEMENTS AND AWARDS

Dean's List: Columbia University (Summer 2024 – Summer 2025; all applicable semesters)

World Mathematics Invitational (WMI): Bronze Medal – Global Round, Silver Medal – National Round

National Schools Debating Championships (NSDC): First Place, Top Speaker