Cecilia Li

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Education

Sep 2019 – Jun 2021 **Columbia University**, United States of America.
Master of Science (Operations Research).
Selected Coursework: Foundations of Optimization, Foundations of Stochastic Modeling, Real Analysis, Probability Theory, Econometrics and Statistical Inference, Supervised Machine Learning, Mechanism Design for Social Good.

Mar 2014 – Nov 2017 **The University of Sydney**, Australia.
Bachelor of Science (Advanced Mathematics), Honours Class I (Applied Mathematics).
Honours Thesis: "A Discrete and Continuous Dictionary", Supervised by Robert Marangell. Studied at The University of Nottingham (UK) as an exchange student from Sep 2015−Jan 2016.
Selected Coursework: Calculus, Linear Algebra, Discrete Mathematics, Differential Equations, Introduction to Programming, Data Structures, Formal Languages and Logic, Artificial Intelligence.

Previous Experience

Jun 2020 – Present **Columbia University**, United States of America.
Teaching Assistant, Columbia Business School.
- Supervised review sessions, wrote assignment problems and marked assessments for the courses: PhD Foundations of Optimization (B9118), Fall 2020; PhD Foundations of Stochastic Modeling (B9119), Spring 2021; MBA Operations Management (B6102), Summer 2021.

Research Assistant (Supervised by Carri Chan and Jing Dong), Columbia Business School.
- Using empirical research methods, statistical inference techniques and regression analysis to infer the system and severity-based factors that typically lead to nurses' perceptions of feeling overworked in hospitals, and better understand the effect of nurse staffing levels on patient outcomes and hospital service quality.

Nov 2016 – Aug 2019 **Deloitte Australia**, Sydney.
Analyst, M&A Analytics (Financial Advisory).
- Wrote monthly functional updates for the iDeal M&A Analytics platform using Dynamic SQL. Assisted in the construction and delivery of various data-driven solutions for over 30 M&A engagements, with an emphasis on transactional data and time series analysis, as well as customer growth and retention strategy.
- Constructed a random forest model for a global private equity firm targeting the acquisition of shopping malls in Australia; key insights included the predicted malls with the most potential for revenue uplift based on socioeconomic census data and credit card transactional data. Constructed an interactive regression model to provide recommendations for reducing a debt collection client's risk; predicted the period after which collections may not be profitable in comparison to the purchase amount of the ledger.
- Established a training program to allow non-technical colleagues the opportunity to learn about the basics of programming, databases and machine learning. Volunteered as a graduate student representative, answering questions from STEM students interested in applying to Deloitte Australia through the graduate program.

Intern, Strategic Capabilities (Internal Client Services).
- Developed Tableau visualization templates and analytic frameworks that could be automated at scale using SQL, and wrote unit tests using the tSQLt framework. Worked on the back end development of the Deloitte Input Tax Accelerator by programming APIs in Dynamic SQL that retrieved and altered data depending on specific user permissions.
- Wrote revision quizzes testing basic programming skills and SQL syntax that eventually contributed to the team's new starter training program. Contributed to the team's "Tuesday Tutorials" initiative by giving presentations about the potential applications of data mining and machine learning algorithms in the Audit industry.

Nov 2018 – Jun 2019 **The University of Sydney**, Australia.
Research Assistant (Supervised by Irena Koprinska), School of Computer Science.
- Assisted in writing a working paper about using supervised machine learning techniques to automate the process of diagnosing patients with respiratory diseases, such as asthma and COPD.

Feb 2017 – Nov 2017 **The University of Sydney**, Australia.
Academic Tutor, School of Mathematics and Statistics.
- Supervised weekly tutorials and marked assessments for the undergraduate courses: Linear Algebra (MATH1002), Semester 1 2017; Discrete Mathematics (MATH1004), Semester 2 2017.

Miscellaneous

Technical Skills.
Alteryx, Git, Java, LaTeX, MATLAB, Microsoft Office, Python, R, SQL, SSIS, Tableau, Weka, Wolfram Mathematica.

Awards & Honors.
Columbia Business School Fellowship (2019−2021); Eleanor Sophia Wood Postgraduate Research Traveling Scholarship (2019−2021); Chris Cannon Prize (2018); K.E. Bullen Scholarship No. III (2017); University of Sydney School of I.T. Summer Research Scholarship (2016−2017); University of Sydney Academic Merit Prize (2016); Dean's List of Excellence in Academic Performance (2016); Sydney Abroad International Exchange Scholarship (2015−2016); Participant in The University of Sydney Science Faculty's Talented Student Program (2014−2015).

Extracurricular Activities.
Girls' Programming Network Tutor (2016−2019); National Computer Science School Challenge Tutor (2018); University of Sydney Exchange Program Mentor and Representative (2015−2016); Participant in the Sydney Genesis Start-Up Program (2016); Associate in Music Australia, Diploma for Piano Performance (AMusA, 2010).