JESUS IGNACIO BALCAZAR

Chicago, IL | igna.balcazar@gmail.com | 785-727-6776

EDUCATION

DePaul University   **Chicago, IL**
Master of Science in Applied Mathematics-Actuarial Science Concentration GPA:3.3   Spring 2024

University of Kansas   **Lawrence, KS**
Bachelor of Science in Mathematics - Certificate in Actuarial Science   July 2022
Bachelor of Arts in Economics   July 2022

WORK EXPERIENCE

Munich Re   **New York City, N**
Actuarial Intern   June 2023 – August 2023
- Redesign the New Business Model distribution template encompassing over 80,000 enforced policies, for quarter-end financial reporting, achieving a 96% reduction in processing time.
- Automated data collection involves establishing an automated database system that utilizes Excel, Power BI, and SQL to regularly monitor and compile the monthly Mortality and Earnings Report.
- Analyzed business risk portfolio and presented recommendations for potential new markets to the executive team.
- Led the comprehensive Living Benefits reinsurance quoting process, overseeing every step from the initial receipt of the RFP from the client, through detailed analysis and evaluation, to the finalization and presentation of the pricing memo. This involved close coordination with various stakeholders to ensure accuracy and alignment with client needs.
- Developed the pricing model in GGY AXIS, calculated maximum allowance structures to meet minimum profitability metrics, and interpreted how changing different assumptions would impact the cashflows and reserve amounts.

DePaul University   **Chicago, IL**
Graduate Research Assistant, Applied Mathematics   January 2023 – June 2024
- Responsible for conducting research on a topic in applied mathematics such as "*Benford's Law and Constant-recursive sequences*" Tasks included conducting extensive literature reviews, designing and executing experiments, and performing in-depth data analysis.
- Led the data collection and analysis process utilizing statistical methods, computer programming, and various quantitative techniques.
- Collaborate closely with faculty members from DePaul University's Mathematical Sciences Department to oversee research initiative projects involving Bayesian Statistics, Time Series Analysis, and Statistical Data Management.

Oliver Wyman | Bootcamp   **Remote**
Actuarial Intern   June 2022 – August 2022
- Analyzed life and annuity products with practical real-life applications, gaining insights into the actuarial pricing process and product development for life and annuity products.
- Developed software useful technical skills that are essential in actuarial practice, including hands-on experience with Macros in Microsoft Excel and VBA through interactive demonstrations.
- Explored actuarial software platforms, gaining familiarity with modeling processes and receiving demonstrations of industry-standard tools like Prophet and GGY AXIS.
- Researched current and emerging software solutions and business challenges in the actuarial field, focusing on data visualization and machine learning applications.
- Conducted research on valuation methodologies and regulatory frameworks relevant to actuaries, emphasizing the objectives of PBR, LDTI, and IFRS17 within the insurance sector.
- Applied the basics of property and casualty insurance, including the pooling of risk and the various coverages offered.

University of Kansas   **Lawrence, KS**
Teaching Assistant, Mathematics   September 2019 – May 2022
- Coursework: Differential Calculus, Integral Calculus, Theory of probability & Statistics
- Led recitation sessions for undergraduate students on multi-variable calculus including different techniques.
- Provided individualized assistance to students clarifying lecture concepts and creating new practice problems.
- Paper grader: Provide feedback to students on Linear Algebra and Statistics and answer questions from the class.
- Collaborated with faculty from the University of Kansas Department of Mathematics in proctoring gateway tests.

RESEARCH EXPERIENCE

2024	DePaul Dept. of Mathematics "Predictive Models of Financial Market Volatility Using Time Series Analysis
2023-2024	DePaul Department of Mathematical Sciences Master's Thesis "Benford's Law and Recursive sequences"
2023	DePaul Dept. of Mathematics "Statistical Data Management using SQL and Python for analyzing data"
2023	DePaul Dept. of Mathematics "Bayesian Statistics Analysis using extensive RStudio packages and functions"
2022	KU Dept of International Finance "Analysis of Market Stocks S&P 500 using Benford's Law technique"
2021-2022	KU Dept. of Economics Econometric Analysis of Tobacco Consumption after Price Increases using STATA

SKILLS
- Advanced skills in Excel / Microsoft Suite Office and beginner in GGY AXIS
- Intermediate knowledge of C++, MATLAB, LaTeX, Mathematica, STATA, RStudio, SQL, Python
- Languages: English and Spanish- Bilingual

AWARDS
- OLA Academy Actuarial Foundation Scholarship -Organization of Latino Actuary- 2023
- Graduate Assistantship Award 3 times from the Department of Mathematics at DePaul University 2022-2024
- National Chess Champion out of 150 players – 2015