

Patricia Marie Barrier

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EDUCATION:

M.S. Degree in Data Science and Business Analytics (in progress) University of North Carolina Charlotte, Charlotte NC

Master of Arts Mathematics Appalachian State University, Boone NC

Bachelor of Science in Mathematics, minor Computer Science Appalachian State University, Boone, NC

TECHNOLOGY:

Tableau, PowerBI, MySQL, SQLite, Microsoft Office, Microsoft Access, Viseo, Camtasia Studio, , Maple, (Minitab (Statistics Software), website development (HTML and Dreamweaver)

SKILLS:

Programming Languages: HTML, SQL, SAL, MAL, R, C++

PROFESSIONAL EXPERIENCE:

Data Science and Business Analytics Studies & Graduate Assistant University North Carolina Charlotte, Charlotte NC
August 2018-Current

- Performed data preparation and analysis on healthcare data, insurance claim data, sales data, and consumer data sets, including cleaning and wrangling
- Used modeling techniques to describe data and make predictions
- Designed computer interface to manage data; utilized cloud computing for data analysis Experience applying Tableau, PowerBI, R, SAS, SQL, Excel
- Imported data into Tableau and created live, 3 dimensional layered, interactive graphs
- Obtained appropriate permissions for use of anonymized healthcare data sets
- Developed a GitHub portfolio from analysis results of project data, analyses include machine learning with decision trees, random forest, texting mining, logistic regression, AROC, model testing/training in R, and forecasting
- Developed statistics content for a prerequisite self-taught student readiness course which readied data science professionals interested in advancing their professional development

Appalachian State University Boone, NC

August 2017-Current

Statistics & Business Math with Calculus Professor:

- Helped develop curriculum mapping for math literacy and published literature on applied learning for non-mathematical minds
- Developed online courses covering Statistics
- Taught both community college and university student populations; established and maintained mentor relationships with students of all ages and socioeconomic backgrounds
- Performed outreach to transfer students to engage them with the student body and other faculty and encourage student retention
- Maintained social media presence on Facebook on behalf of the Mathematics department
- Taught Excel applications for advanced statistical analysis of data

Rowan-Cabarrus Community College Concord, NC

August 2011-May 2017

Statistics & Pre-Calculus Instructor:

- Performed a customer -facing role, serving student needs and encouraging retention
- Managed course development, implementation, assessment, monitoring, and quality standards

- Provided mentorship to junior instructors in curriculum development and management of student body
- Advised students on how to navigate their college career and provided insight into further career development
- Participated in conflict management, best practices, and legal framework training related to the development of the student body
- In collaboration with educators around the state, redeveloped state standards for college math courses in North Carolina

PROFESSIONAL DEVELOPMENT:

- Graduate Certificate in Data Science and Business Analytics
- Database management Course

Publications and Speaking Engagements

- Co-Authored Article *Tessellations: Tiling the Plane* published in The Centroid – The Journal of the North Carolina Council of Teachers of Mathematics Volume 44, Issue 1 of Fall 2018 (with Dr. Holly Hirst)
- Master Advisor, selected by committee, specializing in overall curriculum interpretation, planning, and academic advising for students, Fall 2013 & Spring 2014
- NC State Redesign of the NCDAP Math Placement Test, , Spring 2013
- Speaker for Colleague Training Seminar, Tea & Technology: *Incorporating the Smart Podium in the Classroom*, December 2009
- Guest Speaker at Guy Jacobson Memorial Mathematics Colloquium: *A Mathematician's Views on Minesweeping and Partying*. Topics: graph theory & probability, November 2008