

# Matthew van Bommel

matthewvanbommel.com

---

## TECHNICAL SKILLS

Data Science: **R** (5 years), **SQL** (1 year), **Python** (1 year), **MATLAB** (1 year)  
Report Creation: **Microsoft Office** (5+ years), **LaTeX** (4 years), **R Markdown** (1 year)  
Web Development: **HTML & CSS** (1 year), **JavaScript** (beginner)  
Data Visualization: **Tableau** (beginner), **Shiny** (beginner)

---

## DATA SCIENCE EXPERIENCE

**Applied Statistics Research Assistant** (Simon Fraser University) 2015 – Present

- Using R to perform statistical analysis on spatio-temporal NBA player tracking data.
- Estimating logistic regression models to quantify scorekeeper biases.
- Employing machine learning techniques to determine optimal defensive positioning.
- Interfacing with a PostgreSQL database to access billions of rows of tracking data.
- Collaborating with Luke Bornn (the supervising professor) and fellow students in the Bornn Lab.

**Basketball Analytics Intern** (Philadelphia 76ers) Winter, 2017

- Analyzed, developed, and gathered data to support the Basketball Analytics & Strategy department in all areas of basketball decision making including front office, coaching, and scouting.
- Used Python to perform machine learning and statistical modelling to gain insight into a variety of data sources.
- Produced reports detailing the results of my analyses for stakeholders with both technical and non-technical background.

**Computational Statistics Research Assistant** (Acadia University) 2012 – 2015

- Determined the optimal locations for turbine placement within the Minas Passage.
  - Conducted computer experiments to estimate a power generation surface.
  - Optimized power surfaces using genetic algorithms.
- 

## EDUCATION

**Master of Science in Statistics** Simon Fraser University  
Burnaby, British Columbia 2015 – Present

- GPA: 4.21 / 4.33
- Expected Graduation: Summer, 2017
- Dr. David Eaves Graduate Scholarship in Statistics for Academic Excellence in Graduate Courses
- NSERC Alexander Graham Bell Canada Graduate Scholarship (\$17,500)

**Bachelor of Science with Honours in Mathematics and Statistics** Acadia University  
Wolfville, Nova Scotia 2011 – 2015

- GPA: 3.99 / 4.00
- Thesis: A Stage-Wise Surrogate Modelling Algorithm for Tidal Power Simulators
- Chipman Silver Medal for the Second Highest Overall Graduating Average in the Faculty of Science
- Board of Governor's and Acadia Excellence Entrance Scholarships (\$42,000)
- NSERC Undergraduate Research Awards (2 x \$4,500)

## STATISTICAL RESEARCH PROJECTS

### Adjusting for Scorekeeper Bias in NBA Box Scores

- Accepted for publication in the journal "Data Mining and Knowledge Discovery". 2017
- Presented at MIT Sloan Sports Analytics Conference (Research Poster). 2016

### A Stage-Wise Surrogate Modelling Algorithm for Tidal Power Simulators

- Statistical Society of Canada Annual Meeting and National Conference (Oral Presentation) 2014
- Student Research Presentation Award (Joint Undergraduate and Graduate Competition)
- Science Atlantic Mathematics and Statistics Regional Conference (Oral Presentation) 2013, 2014
- First Place, Statistics Oral Presentation Research Award

## WORK EXPERIENCE

**Teaching Assistant: Statistics** (Simon Fraser University) Fall, 2016

**Teaching Assistant: Mathematics and Statistics** (Acadia University) 2012 – 2015

- Presented tutorials on statistical analyses using the R programming language.
- Communicated statistical concepts and ideas to students from non-statistical backgrounds.
- Tutored students in several courses through a drop in help centre and helped them understand a variety of techniques and ideas.
- Evaluated student assignments and provided helpful feedback.

**Resident Assistant** (Acadia University Residence Life) 2012 – 2014

- Worked within a team to provide a sense of community to residents in Cutten House, which received the Acadia Residence Life Community of the Year Award in 2013.
- Planned and organized informational programs and group activities for residents.

## VOLUNTEER AND EXTRACURRICULAR EXPERIENCE

**Council Member** (Simon Fraser University Graduate Student Society) 2015 – Present

- Discussing and voting on all major Graduate Student Society outcomes while applying critical thinking and decision making skills.
- Representing the Statistics and Actuarial Science Caucus and serving as a line of communication between the caucus and council.

**Volunteer Basketball and Soccer Coach** (Special Olympics British Columbia) 2016 – Present

- Planning and executing practices for a team of athletes with intellectual disabilities.
- Mentoring athletes and developing a sense of community among team members.

**Student Workshop Series** (Vancouver Institute for Visual Analytics) Fall, 2016

- Explored visual analytics concepts through lectures, discussions, and completion of a project.
- Trained with various data visualization tools including Tableau, Trifacta, Jigsaw, and Gephi.

**Mathematics and Statistics Society Member** (Acadia University) 2011 – 2015

- President** (2014 – 2015): Led the executive team to organize events and activities for members and represented members and their interests within the Acadia community.
- Seminar Series Coordinator** (2013 – 2015): Organized a seminar series focused on presenting active mathematical and statistical research areas to both undergraduate and graduate students.