

# **Evan Collin Ezell**

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## **EXPERIENCE:**

### **Graduate Research Assistant**

#### **University of Tennessee/Oak Ridge National Laboratory**

**May 2018 – Present**

Geographic Information Data Scientist

Responsibilities: Performed exploratory data analysis and various data mining techniques on navigation data for the Knoxville area. Developed a web application for the Urban Information System (UrbIS), hosted by ORNL, that aesthetically explores the data and allows users to tangibly interact with the data in a convenient environment. The project fits into the UrbIS WebGL, which explores a number of other big datasets.

- R: shiny, leaflet
- Elasticsearch
- JavaScript, HTML, CSS
- Data Science

### **Oak Ridge National Laboratory Higher Education Research Experience**

**May 2017 – August 2017**

Geographic Information Data Scientist

Responsibilities: Developed time series comparison suite for the World SpatioTemporal Analytics and Mapping Project (WSTAMP). Integrated and optimized the dynamic time warping algorithm to compare geographic attribute portfolios for various geographies, timeframes, and variables of interest. Dealt with massive geographic data sets effectively and efficiently

- R
- C++
- Data Science

### **Oak Ridge National Laboratory Higher Education Research Experience**

**January 2017 – May 2017**

iOS Mobile Application Developer

Responsibilities: Developed and maintained an iOS mobile application for the Environmental Protection Agency that allows risk assessors to access regional screening levels for different chemicals. Developed the web API that allows the mobile app to interface with server.

- Swift
- Objective-C
- RESTful Services
- JSON

### **Oak Ridge National Laboratory Higher Education Research Experience**

**May 2016 – August 2016**

Web Developer and Toxicology Risk Researcher

Responsibilities: Developed various risk models into the Risk Assessment Information System (RAIS) web application. The purpose of the RAIS is to evaluate and remediate legacy contamination from the Manhattan Project for the public, subcontractors and state and federal regulators. I developed the Radon

Vapor Intrusion Screening Level Calculator, which determines the risk a resident, commercial worker, or other person has to getting lung cancer based on certain exposure parameters and radon readings.

- PHP, Perl, HTML, CSS
- ORACLE DB
- SAS
- Mathematical Modeling

#### **EDUCATION:**

**University of Tennessee** Knoxville, TN (Current School)

**PhD Student**

**Data Science and Engineering with Entrepreneurship Track**

**Bredesen Center for Interdisciplinary Study**

**Maryville College** Maryville, TN May 2018

**Bachelor of Arts Degree in Computer Science**

**Minors in Mathematics, Statistics, and Analytics**

- Dean's List Every Semester
- Association of Computing Machinery President
- Scots Science Scholar
- NCAA Varsity Baseball
- Student Athletic Advisory Committee
- Competition Programming Team

#### **TECHNICAL SKILLS:**

Platforms: UNIX/Linux, Mac, Windows

Languages: C/C++, Java, Javascript, SQL, R, Perl, PHP, HTML, CSS, Swift, Objective-C, Latex

Applications: Microsoft Office, Maple, RStudio, SPSS

**Related Coursework:** Data Mining, Database Management Systems, Algorithm Design and Analysis, Regression Analysis, Inferential Statistics, Probability and Statistics I, Probability and Statistics II, Intro to Operating Systems, Data Structures, Graphical User Interfaces, Theory of Computation, Compiler Construction, Linear Algebra, Discrete Structures, Calculus I, Calculus II, Calculus III

#### **PROJECTS:**

**2017 Joint Mathematics Meetings Presenter, Atlanta, Georgia**

**Synchronicity among Gender-Identifying Pairs and Quantifying the Complexity of Rectilinear Motion**

*We set out to decide whether like or non-like gender pairs synchronized better using the "Mirror Game". We showed that neither group tended to synchronize better than the other. In this study, we updated a past paper written by Uri Alon on a similar topic. We found that when partners jointly improvise the complexity of their motion is lower, which Alon did not take into account. We believe that how well the partners synchronize is correlated with the complexity of the motion they create. We are doing further research attempting to control the complexity of the motion by providing goals to obtain throughout each round.*

- Developed a mathematical model to calculate the complexity of rectilinear motion
- Analyzed the results of our mathematical model using various statistical methods
- Compared the findings of our work with relevant papers in the field
- Presented poster at the 2017 Joint Mathematics Meetings
- Currently working on academic paper to publish the results

**2016 Joint Mathematics Meetings Presenter, Seattle, Washington**

**A Synchronized Rectilinear Motion Activity for the College Calculus Sequence**

*Introducing the concept of calculating area between two curves by analyzing student data generated during the "Mirror Game". The Mirror Game consists of two people moving an object along a single axis while attempting to synchronize their movements as*

*closely as possible. Provided the framework to use this activity for applications such as polynomial fitting, curve smoothing, and area approximation methods*

- Effectively led project planning and execution
- Innovated new mathematical pedagogy
- Presented poster at the 2016 Joint Mathematics Meetings

### **2015 Joint Mathematics Meetings Contributive Talk, San Antonio, Texas**

#### **A competency-based path to avoiding the developmental mathematics course using Khan Academy**

*A competency-based process using Khan Academy and an in-house online placement test that allows students to show readiness for college-level math courses before arriving on campus as first-year students*

- Conducted statistical analysis of retention data
- Presented data at the 2015 Joint Mathematics Meetings

### **HONORS & AWARDS:**

#### **J.D. Davis Award** May 2018

In honor of John A. (J.D.) Davis, honors a senior student-athlete who exhibits leadership, athletic ability, Christian values, and academic achievement.

#### **Alpha Gamma Sigma Honor Scholarship Society of Maryville College** April 2018

Members must be of good moral character, have a grade point average of at least 3.33, be eligible to graduate with honors, and rank in the top 10% of the graduating class.

#### **Jerry L. Pietenpol Computer Science Award** April 2018

Given to the most outstanding and promising junior or senior student majoring in computer science.

#### **Outstanding Achievement in Statistics Award** April 2018

Given to the most outstanding student in the advanced study of statistics.

#### **Russell N. and Frances Lane Edwards and Troy Bell Lane Waggoner Award** April 2017

Presented to the most outstanding junior or senior in the department of mathematics and computer science.

#### **William H. Dent Calculus Award** April 2016

Presented to the student with the most outstanding performance in calculus for the academic school year.

#### **CoSIDA Academic Southeast All-District Baseball Team** April 2016

Presented to nation's top student-athletes for their combined performances athletically and in the classroom.