# Kai A. Bell

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## EDUCATION

**University of Virginia**                                                                                    **Charlottesville, Virginia**
*B.A. in Computer Science*                                                                                        *May 2024 Graduate*
- o **Related Coursework:** Software Development Methods, Discrete Math, Program & Data Representation, Intro to Data Science with R, Computer Architecture, Advanced Software Development, Intro to Cybersecurity, Internet Scale Application, Data Structures & Algorithms, Statistics for Biologists (R Component), Engineering Interactive Technologies, Artificial Intelligence, R Applications in Psychology

## COURSEWORK (cont.)

**Advanced Software Development**
- Analyzed modern software engineering practice for multi-person projects
- Explored industry methods for requirements specification, design, implementation, and maintenance of large software systems
- Semester-long web development project with Python through Django using "scrum" methodology
  - o First-hand experiences with project planning, scheduling, resource management, and documentation

**Internet Scale Applications**
- Surveyed methods for building large-scale internet websites, with a focus on how theory meets practice
- Covered performance engineering, scaling, security, and large team software engineering
- Used tools such as HTML/CSS, JavaScript, Node.js, MongoDB, Docker, Apache, and Git for various small scalable web application projects

## PROJECTS

**Ski Hotel Value Analysis**
- Collaborated with one other team member
- Scraped data from a dataset found on kaggle here
- Used R for data cleaning, manipulation, and visualization.
- Developed a comprehensive report identifying the best value hotels based on metrics such as price, total slope length, distance from nearest slope, etc.
- Presented findings through interactive visualizations and a detailed written report.

**Predicting Wildfire Size and Identifying Wildfire Centerpoints in the U.S.**
- Collaborated in a 5-member team to develop a predictive model using machine learning
- Utilized this dataset covering wildfire incidents from 1992-2015
- Cleaned and engineered features, including one-hot encoding for categorical data
- Implemented logistic regression, decision trees, random forests, k-nearest neighbors, and multi-layer perceptrons
- Applied k-means clustering to identify potential wildfire hotspots across states
- Achieved a top accuracy of 64% with the Random Forest classifier
- Identified wildfire hotspots, which would serve to aid in fire management and prevention strategies
- Wrote a paper covering our experiences, methods, and results available here

## EXPERIENCE

**Physician's Premier Weight & Wellness Center**                                                    **Ashburn, Virginia**
*Practice Business Assistant*                                                                                    *June 2023 - Jan 2024*
- Responsible for creating systems for a multi-location practice that generate the best patient/provider experience, maintaining scheduling protocols, patient communication, and tracking practice supplies
- Designed and completed an innovative system to improve the clinical and administrative department
- Provided exceptional customer service that directly contributed to reduced patient complaints and increased profit for clinical area and products
- Attended and contributed to daily meetings

## SKILLS

**Programming:**  Java, Python, JavaScript, HTML/CSS, Node.js, C++, R, SQL

**Tools:**  Visual Studio Code, Git, Bootstrap, Agile, Docker, Adobe Photoshop, MongoDB, Django, Semantic UI, Microsoft Office Suite

**Soft Skills:** Effective Communication, Team Collaboration, Critical Thinking and Problem-Solving, Writing, Conflict Resolution, Performance Analysis and Enhancement

## REFERENCES

- Maria Schulze - Practice Manager, Immediate Supervisor: mschulze@lmgdoctors.com || Cell: 407-361-4362
- Dr. Trupti Patel, MD - Medical Director/Practice Owner: tpatel@lmgdoctors.com
- Jason Burston - Front Desk Coordinator: jburston@lmgdoctors.com