

William Boyles

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Education

North Carolina State University

B.S. COMPUTER SCIENCE & MATHEMATICS

Raleigh, NC

2018 - 2022

- Valedictorian, Summa Cum Laude, Phi Beta Kappa, Dean's List (8 semesters)
- University Honors Program, Computer Science Honors Program

Experience

Microsoft

SOFTWARE ENGINEER

Redmond, WA

August 2022 -

- Created near-real-time Spark data processing pipelines that handle terabytes of pricing data per day
- Automated common interactions with production, reducing mitigation times and risk of unintended changes
- Automated deployment of cloud infrastructure to airgapped environments, minimizing the need for manual steps

Microsoft

SOFTWARE ENGINEERING INTERN

Redmond, WA

Summer 2021

IBM

CLOUD & COGNITIVE SOFTWARE INTERN

Durham, NC

Summer 2020

Forsyth Country Day School

ENGINEERING CAMP COUNSELOR

Lewisville, NC

Summers 2016 - 2019

Pool Professionals

LIFEGUARD

Winston Salem, NC

Summers 2017 - 2019

Skills

Languages: Python | Scala | C# | SQL | Java | JavaScript | \LaTeX | HTML

Technologies: Spark | Azure | Bootstrap | Git

Projects

Lights Out

Android App

- Based on 1990's handheld electronic game, but has more features like dynamic board sizes
- Written in Java using Android Studio, released for free on Google Play Store

NCAA Bracket Prediction

Python Tool

- Automatically scrapes the latest game data and outputs pre-filled bracket predictions as a \LaTeX -compiled PDF
- Python tool that implements PageRank, Elo, Bradley, and other custom ranking algorithms
- Algorithms consistently outperform average prediction tournament entries and my personal predictions

wmboyles.net

Personal Website

- Personal domain containing resume, detailed project write-ups, and contact info
- Designed using Bootstrap and Jekyll, increasing mobile usability while minimizing code redundancy

Math Summaries

Open Source Math Textbooks

- Summaries of college math courses written in \LaTeX and published as PDFs, allowing community contributions
- Committed to the public domain, providing educational information for free

Writing

Most Clicks Problem in *Lights Out*

Research Article

- Introduced the Most Clicks Problem, and solves it for two specific instances
- Published to ArXiv

Resolution to Sutner's Conjecture

Research Article

- Proves 30+ year old conjecture related to the Lights Out Game
- Published to ArXiv