

# SAIEM GILANI

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Big Data and Machine Learning Engineer pursuing computer vision roles to utilize strong background in spatio-temporal data processes, sports analytics, and visualization. Member of 2020 MIT Sloan Sports Analytics Conference Hackathon winning team, perfect scorer on American Math Competition 12 exam (2×), and USA Math Olympiad Qualifier (3×).

## EXPERIENCE

### Independent Contracting - KRInnovative

#### Analytics Consultant and Data Science Internship

6/2017 - 12/2018, 1/2020 - 4/2020 Tallahassee, FL

- Created ETL process for freight shipping platform and implemented GPS tracking for real-time data on shipments.

### State of Florida

#### Actuarial Analyst - P&C, Off. of Insurance Regulation

5/2014 - 8/2014, 2/2015 - 3/2017 Tallahassee, FL

- Reviewed commercial and personal rate/rule filings to determine compliance with Florida Medical Malpractice insurance laws, and evaluated the reasonableness of these rate filings by reviewing trends and support.
- Analyzed \$1B+ fund for the Neurological Injury Compensation Association for solvency by evaluating current claims and projecting future liabilities to produce an annual report for Executive Management.

#### Systems Programmer III, Dep. of Health

- Developed learning mgmt. system for IT course enrollments.

### Optum

#### Associate Actuarial Analyst

2013

Denver, CO

- Created and enhanced analytics reports for Accountable Care Organization (ACO) clients, including HCC summaries, inpatient readmissions, high cost beneficiaries, leakage out-of-network, and attribution. Helped develop cost and utilization reports by cleaning up raw Medicare data.
- Became proficient with SAS and Tableau while working on monthly and ad hoc reporting to evaluate opportunities for risk management in a client's ACO population.
- Provided support for design and pricing of health plans for CO-OP Initiatives in Tennessee and South Carolina.

### Capital Health Plan

#### Actuarial Analyst - Commercial (Large and Small Group)

6/2012 - 12/2012

Tallahassee, FL

- Built member movement analysis tools in response to the Affordable Care Act using Access and VBA.
- Performed data support function for commercial plan pricing and rate filings. Duties included revenue variance analysis, group profitability reporting, and updating databases in SQL.

## TECHNICAL SKILLS

### Statistical/Scripting

Python, R, Scala, MATLAB, Java, SAS, Excel/VBA, WinBUGS, Arena, Mathematica, Bash, PowerShell.

### Databases/Cloud Platforms

SQL Server (SSIS/SSRS), Hadoop, Hive, Spark, Pig, PostgreSQL, NoSQL, Access, AWS, Azure, GCP.

### Web/Visualization

JavaScript (Angular, React, D3), Tableau, PowerBI, LaTeX.

## EDUCATION

### M.Sc. Analytics

Georgia Institute of Technology 1/2019 - 5/2020

### B.Sc. Mathematics

Florida State University 1/2009 - 5/2012

## PROJECTS

### cfbscrapR, a package for working with CFB data

- An R API wrapper around <https://collegefootballdata.com/>.
- Built the updated Expected Points Added model and the new Win Probability Added model for the package.

### NCAA Situational Box Scores

- Developed a categorical mapping of all starting possession situations for men's college basketball to determine natural team pace and situational strengths and weaknesses.
- At predicting margin of victory, model outperformed Ken-Pom (67.2%) and Bovada (58.0%) during the 2017-18 and 2018-19 NCAA Men's Basketball high major conf. games.

### NHL Goaltender Empirical Estimation, Tableau

- Built expected goals ( $xG$ ) model using XGBoost with MoneyPuck dataset; Our models surpassed the model considered state-of-the-art in log-loss score.
- Our statistical test for goalie talent based on empirical CDFs and simulation gives strong separation between the set of goalies the model signals good or bad after 6 games.

### Deep Elec. Health Records Representation Learning

- Using EHR from the MIMIC-III database, created a deep neural network (DNN) for mortality predictions of patients during first day in hospital or Intensive Care Unit (ICU).
- All Admissions: Train Acc. = 91.3%, Test Acc. = 90.5%.
- ICU Admissions: Train Acc. = 82.7%, Test Acc. = 77.4%.

## HONORS & AWARDS

- 2020 MIT Sloan Sports Analytics Conference Hackathon winning team - ShotTracker CBB spatio-temporal dataset.
- American Math Competition 12 Perfect Scorer and State Winner (2007, 2008); USA Math Olympiad (2006-2008).
- 2<sup>nd</sup> place in Combinatorics, 7<sup>th</sup> place in Calculus at Harvard-MIT Math Tournament (2006, 2008).
- 3<sup>rd</sup> place in Number Theory at Princeton University Math Competition (2007).

## CERTIFICATIONS AND CREDENTIAL PROGRAMS

- MCSA: SQL 2016 Database Development.
- Microsoft Professional Program in Data Science.
- Microsoft Professional Program in Artificial Intelligence.
- Tableau Certified Associate.
- Society of Actuaries P, FM.