

# HYUN SUK RYOO (MAX RYOO)

## Programmer and Data Scientist

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### EDUCATION

#### B.A. in Computer Science (GPA: 3.7)

##### University of Virginia

Aug 2016 – May 2020

Relevant Courses: Machine Learning (CS 4774/4501), Database Systems (CS 4750), Artificial Intelligence (CS 4710), Programming Languages for Web Applications (CS 4640), Algorithms (CS 4102), Computer Architecture (CS 3330), Program and Data Representations (CS 2150), Software Development Methods (CS 2110), Discrete Mathematics (CS 2102), Introduction to Programming (CS 1113), Intro to Data Science with Python (STAT 1559)

#### B.A. in Statistics (Biostatistics Concentration) (GPA: 3.6)

##### University of Virginia

Aug 2016 – May 2020

Relevant Courses: Statistical Machine Learning (STAT 5630), Data Visualization and Presentation (STAT 4310), Data Analysis with Python (STAT 3250), Introduction to Regression Analysis (STAT 3220), Elementary Linear Algebra (MATH 3351), Introduction to Probability (MATH 3100), From Data to Knowledge (STAT 3080), Introduction to Statistical Analysis (STAT 2120), Intro to Biology (BIOL 2100 & 2200), Intro to Data Science with Python (STAT 1559)

### EXPERIENCE

#### Software Engineer Intern

##### Fannie Mae (Capital Markets Treasury CASH TMS L3 Team)

Jun 2019 – Aug 2019 (3 Months)

Herndon, Virginia

- Project: Developed a end to end Dashboard that tracks all Fannie Mae wire payments. The dashboard is integrated into the Capital Markets Treasury CASH TMS L3 Team. The dashboard keeps tracks an average of net \$13 Trillion wire transactions a year. The dashboard makes it easier for employees to track problematic wires and see transactions easier on a day to day basis.
- Project: Automated the Deployment Processes of Applications to one click deployment
- Project: Developed a REST API for Calendar Date Services and ID Services
- Technologies Used: Spring, MS SQL Server, Oracle, Java, Python, Maven, HTML/CSS, JavaScript

#### Data Science Contractor / Database Developer Intern

##### S.W.I.F.T. (Innovation Lab / Database Development)

Jun 2018 – May 2019 (1 Year)

Manassas, Virginia

- Project: Developed a REST API for filtering and updating Security Violation logs. The API filters out Security Violations from k thousand line files to 100 lines. Original time of completion (x hours or days) is now minutes. Continued to work on this project as a Data Science Contractor incorporating Data Science techniques.
- Technologies used: Node.js, Express.js, MongoDB, SQLite3, Python, HTML/CSS, Docker

#### Teaching Assistant CS 4750 (Database Systems)

##### University of Virginia

Aug 2018 – Present

Computer Science Department

- Teaching Assistant: Was a teaching assistant for CS 4750 Database Systems for two semesters. The class introduces fundamental concepts for design and development of database systems.

### RESEARCH

Interests: Machine Learning, Model Analysis, Quantitative Methods

#### Research Assistant

##### Machine Learning and Data Mining in Psychology

August 2019 - Present

UVA (Psychology)

- Currently doing research in the field of Psychology with technologies of Machine Learning and Data Mining to track and see progress of depression treatments in patients.
- Supervisor: Hudson Golino Ph.D.

#### Data Engineer

##### Measure of Cognitive Ability Research

May 2019 - Present

USC & UVA

- Developed a Web-server and Web-application to maintain and process data from Measure of Cognitive Ability (MOCA) tests. The purpose of this research project is to develop a measure of cognitive ability and its scale of cognitive ability.
- Technologies Used: AWS, Wordpress, MySQL, Python, Scikit-learn, R, Tidyverse
- Principal Investigator: Ji Hoon Ryoo Ph.D.

### SKILLS

#### Programming Languages

Python   Java   JavaScript   TypeScript   C++/C  
R   SAS   SQL   PHP   LATEX   x86   Docker

#### Frameworks

Node/Express JS   Spring Framework   Angular

#### Libraries/Packages

Scikit-learn   Tensor Flow   Keras   AWS   Maven  
Tableau   Mathematica

#### Databases

Oracle   MS SQL Server   Mongo DB   MySQL  
SQLite3

#### OS

Unix/Linux   Windows

#### IDE

Eclipse   IntelliJ   Anaconda   Jupyter Notebook  
Vim/Emacs   Visual Studio Code  
All Microsoft Office Suite

#### Languages

English   Korean

### PROJECTS

#### Full-Stack

##### KSEA at University of Virginia

- https://uva-ksea.org/

#### Web-developer

##### Saban Research Institute of C.H.L.A

- Temp Link: http://178.128.178.177:3000/

#### Hackathon

##### Swift Company Hackathon

- Source Code: https://github.com/hyunsukr/SwiftEats

#### Full-Stack

##### UVA CS 4640

- Source Code: https://github.com/hyunsukr/DeCo

### LEADERSHIP/EXTRA CURRICULAR

KSEA Vice President

May 2018 – Present

KSA Outreach Chair

Jun 2017– May 2018

Madison House Volunteer

Sep 2013– May 2018