

HYUN SUK RYOO (MAX RYOO)

Machine Learning Engineer

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EDUCATION

M.S. Health Informatics & Data Science
Georgetown University - Current

B.A. Computer Science (3.7) & B.A. Statistics (Biostatistics Concentration) (3.6)
University of Virginia - Class of 2020

EXPERIENCE

Software Engineer

Capital One (Center For Machine Learning & Anti Money Laundering)

Aug 2020 – Current

McLean, Virginia

- Develop a belief propagation algorithm with Scala using graph database to determine risk scores of each bank customer to prevent money laundry.
- Develop an Application for clients to use to research outputs of above project.
- Technologies Used: Scala, Spark, Pyspark, Python, Gremlin, Neptune, React, Flask, Bash, Ansible

Junior Software Developer

Thinking with Tools, LLC

Dec 2019 – Aug 2020

Charlottesville, Virginia

- Work together with a team to make new features and maintain data for a web application. Make a mobile/web-app with one codebase.
- Technologies Used: Ionic, Angular, Coldfusion, JavaScript, MS SQL Server, Postgress

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

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 – Dec 2019

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 - May 2020

UVA (Psychology)

- Research in the field of Psychology with technologies of Machine Learning and Data Mining with DTM and Text/Network Analysis
- Supervisor: Hudson Golino Ph.D.

Data Engineer

Measure of Cognitive Ability Research

May 2019 - Feb 2020

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

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

Frameworks

Spark Angular React Node/Express JS
Spring Framework Ionic Flask

Libraries/Packages

Hadoop Pyspark Scikit-learn Tensor Flow
Keras AWS Tidyverse Numpy/Pandas npm
Maven Tableau Mathematica

Databases

Neptune Oracle MS SQL Server Mongo DB
MySQL SQLite3 Postgress

OS

Unix/Linux Windows

Languages

English Korean

RELEVANT COURSEWORK

Computer Science

Machine Learning (CS 4774/4501)

Database Systems (CS 4750)

Artificial Intelligence (CS 4710)

Programming Languages for Web Apps (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)

Statistics

Statistical Machine Learning (STAT 5630)

Data Mining (STAT 5330)

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 Math Statistics (STAT 3120)

Introduction to Probability (MATH 3100)

From Data to Knowledge (STAT 3080)

Introduction to Statistical Analysis (STAT 2120)

Intro to Biology (BIOL 2100 & 2200)