Eric Son

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EDUCATION

University of Chicago | Chicago, IL   Sept 2019 – June 2021
Master of Science, Computational Analysis and Public Policy (CS Department & Harris School)
Coursework: Python Programming, Statistics, Machine Learning, Data Visualization, Database Systems, Big Data Architecture, Cloud Computing

College of William & Mary | Williamsburg, VA   May 2015
Bachelor of Arts, Economics and Film/Media Studies

EXPERIENCE

Data Engineer – Fellow | National Institutes of Health | Bethesda, MD   June 2020 – Jan 2021
- Designed a Django web application to display NIH's $70M energy consumption data and budget projection
- Worked with lead engineers to build ETL infrastructure, wrote MySQL queries to move data into server
- Created R Shiny visualization and reporting tool that summarizes energy usage and cost avoidance data

Data Research Assistant | Center for Municipal Finance | Chicago, IL   Jan 2020 – June 2020
- Built machine learning pipelines with R that outputs automated reports for areas with regressive tax assessments
- Created reports with Seaborn and Altair visualizations about assessments completed by the county

Strategic Targeting Analyst | EAB Global | Richmond, VA   Oct 2016 – July 2019
- Key achievement: automated data collection process for 250+ clients by 90% through Python and Selenium, leading to one billion emails getting sent out a day earlier than in previous years
- Wrote SQL queries to identify opportunities for 80+ clients and developed ArcGIS and Tableau reports for presentation
- Applied predictive analytics model to meet incoming class goals, with a focus on direct marketing campaign to prospective students and recent high-school graduates

PROJECTS

CPS Metrics Dashboard (D3, JavaScript, HTML/CSS)   March 2021
Dynamic visualization that shows Chicago Public School performance metrics and demographics
- Created interactive dashboard using D3.js to display public school enrollment, graduation rates, and demographics

Chicago Streets Stats (Scala, Hive, HBase, Kafka, AWS, Java, Node.js) – Link   Jan 2021
A full-stack big data web application that displays Chicago street congestion, crash, and traffic violation data
- Implemented the Lambda Architecture to store historical data in HBase and ingest rea-time traffic data into Kafka
- Built the front-end with Node.js that allows users to select from a searchable drop-down list
- Used S3 to host the static website, EC2 instance to run the application, and CodeDeploy to release

City of Chicago Salaries (R, Shiny, JavaScript, Heroku) – Link   Nov 2020
Web application that shows annual salaries for Chicago municipal employees
- Used JavaScript and D3 to make graphs, and R to make searchable table of each annual/overtime salaries

U.S. Energy Consumption (Django, Python, Pandas, Seaborn, SQLite, Heroku) – Link   March 2020
Search web application that displays U.S. state energy consumption visualizations since 1950
- Built web scraper/crawler and API to pull energy data and stored them in SQLite database

SKILLS

Programming: Python, R, Java, HTML/CSS, JavaScript, SQL, NoSQL, PostgreSQL
Technologies: Django, Bottle, Flask, Node, Hadoop, MapReduce, Hive, Spark, HBase, Kafka, Thrift
Visualization: D3, Shiny, Seaborn, Altair, Tableau, ArcGIS, Qlik, Power BI