Daniel Cherny

Chicago, IL | dchern97@gmail.com | 224.565.6817

Education

University of Illinois at Urbana-Champaign

Bachelor of Science in Economics & Statistics - 3.42/4.00

Skills & Interests

- **Proficient** - R, Python, SQL, Git, HTML5, CSS3, Microsoft Office; **Limited Proficiency** - Bash, Hadoop, Kafka, Airflow, Spark, Scala, Java
- **Fluent** - Russian; **Limited Proficiency** - Hebrew
- Enjoy watching baseball, playing piano, hiking, traveling, and meeting new people

Professional and Research Experience

Associate Data Solutions Engineer — September 2020 - Present

Epsilon — *Chicago, IL*

- Query and analyze billions of rows of data across production and ad-hoc Greenplum clusters via PostgreSQL and PL/pgSQL
- Instantiated and curated pseudo-random discrete distributions in Python to efficiently allocate Airflow job runs to different times of the hour - thereby reducing server load by over 20%
- Automated and scheduled batch-driven offline file aggregation and verification - saving 100% of the time spent on the task
- Manipulated Kafka consumer properties in Scala to allow for the specification of non-epoch timestamps for Spark jobs in the command line

Biostatistics Research Assistant — July - October 2019

Carl R. Woese Institute for Genomic Biology — *Champaign, IL*

- Aided in improving plant photosynthesis and increasing worldwide food crop yields through RIPE, an $83MM Gates Foundation initiative
- Utilized ANOVA, ANCOVA, t-testing, and linear mixed effects modeling to deploy proper experimental design for 1,296 tobacco plants
- Measured over 5,000 samples' worth of tobacco height and chlorophyll data and logged the results in Microsoft Excel
- Built line graphs, box plots, histograms, scatter charts, and residual plots using ggplot2, ggpubr, and various R packages

Genetics Research Assistant — January - June 2017

Loyola University Chicago — *Chicago, IL*

- Navigated several packages in R to analyze the process of reproduction and inheritance in grains
- Used the NIH and NASA databases to select grain length data for 1146 samples of **Oryza sativa**, and its wild ancestor, **O. rufipogon**
- Uncovered a bimodal length distribution - suggesting that grain length exhibits a homozygous dominant pattern of inheritance and is primarily shaped by a single gene
- Collaborated with a team of 7 researchers to compile and display our findings to the dean of the Biology department

Projects

Tracking the Spread of COVID-19 — April 2020 - Present

- Parse JHU time-series data containing over 1MM observations across US states and countries via the Tidyverse and Formattable R packages
- Build an interactive map tracking the number of confirmed COVID-19 cases across the United States via the Leaflet R package
- Create interactive and animated graphs charting the growth of COVID-19 across the world via the TauCharts and gganimate R packages
- Utilize Reveal.js to render a fully interactive PowerPoint-style presentation augmented with HTML5, CSS3, and R Markdown

Predicting Wealth in America — November - December 2019

- Cleaned US Census Bureau data containing 48,842 observations, 14 feature variables, and 1 response variable using Tidyverse R packages
- Test-train split the data and processed it via cross-validation and out-of-bag resampling methods
- Utilized machine learning algorithms - such as logistic regression and neural networks - to classify individuals by their predicted income status
- Achieved 90% test accuracy through a random forest - signaling that a given individual's income status could be predicted 9 times out of 10

Visualizing Harry Potter — April - May 2019

- Applied the Requests Python package to web scrape “Harry Potter & the Sorcerer’s Stone” from a remote Google Drive database
- Logged the occurrence of main character names by chapter and graphed the totals with the Collections, Re, NumPy, and Matplotlib packages
- Discovered that Harry is mentioned about 310% more often than Ron, 381% more often than Hagrid, and 522% more often than Hermione

Extracurricular Activities

ESL Teacher — June - August 2017

Yangshuo Oral English College — *Yangshuo, China*

- Increased English vocabulary among children aged 6-18 years old by over 30%

Mock Trial — September - December 2017

Loyola University Chicago — *Chicago, IL*

- Finished in the top 16 at the Saginaw Valley State University Regional Tournament