ABIGAIL L. PURNELL

Cell: (650) 450-1310 | **Email:** abbypurnell4@gmail.com | **Address:** 184 Lexington Ave. Apt 7D, NY, NY, 10016

SKILLS

- **Data Analysis Tools:** Python, R, SQL, Git, Tableau, Excel, Bloomberg (e.g., BQL), Capital IQ, Google Cloud Storage
- **Technical:** Financial Modeling, Hypothesis Testing, Data Visualizations, Dashboards, Regressions
- **Other**: Research, Presentations, Client Communications

EXPERIENCE

Associate Data Scientist – Royalties Analytics & Data **(October 2021 – Present)**
Spotify

- Create automation solutions and perform ad-hoc analyses that are used to pay music labels and publishers over $6 billion of royalties annually:
  - <u>Automation of Monthly Processes</u>
    - Maximize productivity through Python automation of multiple Excel workbooks created by accountants every month to track royalty payments
  - <u>U.S. Mechanical Royalties Reprocessing</u>
    - Reconcile deprecated historical pipelines of all U.S. streaming between 2018-2021 (~1.8 trillion streams) and cleanse for current fraud, non-music content, and other critical incidents with Python and SQL to comply with U.S. regulations
  - <u>Month-Over-Month Analytics</u>
    - Improve efficiency on gathering conclusions regarding fluctuating royalty costs for accounting stakeholders through creation of a Streamlit Python Dashboard

Associate & Sr. Associate - Financial Disputes & Economic Consulting **(August 2019 – October 2021)**
Ankura Consulting

- Perform statistical, valuation, and other data-driven analyses for government investigations and commercial litigations:
  - <u>Analysis of the Impact of False Disclosures on Stock Prices for Class Action Lawsuits and SEC Investigations:</u>
    - Calculated damages in R due to allegedly false statements about a company's performance
      - Used regression to estimate abnormal price drops on corrective disclosure dates (controlling for the market)
      - Automated model that identifies damaged shares by simulating investor trading patterns
      - Wrote program to match two million trades using a first-in-first-out and last-in-first-out methodology
      - Used hypothesis testing to compare stock returns on earnings dates to non-earnings dates
  - <u>Valuation of Structured Products for SEC Investigation of Hedge Fund's Financials:</u>
    - Wrote R program to independently value 50+ complex structured products with call, put, and binary option components using Monte Carlo simulations for a hedge fund with $100MM of structured products
      - Performed hypothesis testing to compare valuations to marks in financials
      - Created visualizations showing the payoff diagrams of the structured products
      - Implemented parallelism to decrease run time of simulations by 180% (cut time from 1 hour to 20 minutes)
  - <u>Analysis of Bulge Bracket Bank's RMBS Trades for DOJ Investigation:</u>
    - Created Shiny dashboard and visualizations summarizing email traffic, valuation results, and offers around Residential Mortgage-Backed Securities ("RMBS") trades for bulge bracket bank:
      - Wrote Python program to highlight and sort 500+ documents based on keywords, as well as programmatically compile PDF comments in the 500+ documents
- Assist Ph.Ds., data scientists and quants in drafting reports, final presentations, and memorandums to submit to government agencies and courts detailing methodologies, findings, and assumptions of the analyses performed
- Manage and mentor summer interns and a first-year associate

EDUCATION

Villanova University; Bachelor of Arts in Economics with Minor in Sociology (2019)