Adithya Solai

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EDUCATION

University of Maryland - College Park, MD **Fall 2021**
Bachelor of Science, Computer Science (Data Science Specialization) **Cumulative GPA: 3.938**
Minors: Statistics & Business Analytics

TECHNICAL SKILLS

Languages: Python, Java, SQL, HTML/CSS
Technologies/Frameworks: Pandas, NumPy, Databricks (Koalas, PySpark, SparkSQL), Tableau, Matplotlib

WORK EXPERIENCE

605 (Data Analytics Firm for TV Ad Measurement) **New York, NY**
Junior Data Analyst May 2020 – Present

- Utilizing Databricks' Koalas/PySpark/SparkSQL to optimize SQL queries that operate on a data pipeline of 5+ vendors and billions of rows of data on a daily basis to reduce Spark cluster costs and save future development time.
- Building Tableau dashboards to deliver daily reports with 50+ metrics that visualize the flow and accuracy of data.
- Conducting ad-hoc analysis on data methodology questions to improve the accuracy of 605's Platf0rm app.

Data Solutions Intern June 2019 – August 2019

- **Regression Analysis Script:** Developed a script that accurately compares 605's live algorithms with those in development by randomizing and parameterizing 20+ possible user inputs to generate 10+ million input combinations.
  - Utilized Pandas to define, run, and export hundreds of simulations. Queried relational databases using RedshiftSQL.
  - Generated pre-formatted result sheets to improve readability for non-technical users and visualize problems clearly.
- Presented technical projects and findings clearly and concisely to 45+ technical and non-technical employees.

Self-Employed **Princeton, NJ**
Private/Freelance Chess Tutor September 2016 – August 2019

- Coached 50+ children to become US Chess Federation-ranked players and medalists at dozens of tournaments.
- Taught 100+ lessons to hundreds of students at various chess academies (Hub for Learning) and volunteer groups.

PERSONAL PROJECTS

Monte Carlo Blackjack – Python (Pandas/NumPy/Matplotlib)

- Conducted Monte Carlo simulations on a hand-made Blackjack environment to analyze 3 policies. Reduced casino edge from 20% → 4% by implementing Edward Thorpe's famous "basic strategy" and experimenting with policies.
- Constructing a policy-based, stochastic Reinforcement Learning algorithm that uses the Cross-Entropy Method to teach my Blackjack agent a policy with < 0% casino edge in order to **"crack"** Blackjack!

Linear Algebra Calculator – Java

- Implemented fundamental Linear Algebra functions such as finding the inverse, determinant, and row-reduced echelon form of a matrix. Optimized these functions using advanced concepts from my Linear Algebra course.
- Built Vector and Matrix objects from scratch to create compatibility with Java data structures like arrays and ArrayLists.

NBA Analytics – Python (Pandas/BeautifulSoup)

- Scraped season average stats for 400+ NBA players by analyzing the website's HTML format and using BeautifulSoup to pull the data. Cleaned raw data by utilizing Pandas' Dataframe operations to remove 30+ rows.

Song Lyrics Analysis Script – Java

- Analyzed unique word percentage and word frequency in thousands of song lyrics to investigate the lyrical creativity of various hip-hop and R&B artists. Built this by utilizing Java HashMaps/Sets and expanding on a class example.

adithyasolai.com – HTML/CSS

- Developing a personal website to publish content, build a personal brand, and learn web development along the way!

LEADERSHIP

UMD International Economics and Finance Society – VP of Content December 2019 – Present

- Lead a committee of 4 researchers in developing and presenting professional slide decks and case studies to 70+ club members on topics such as value investing, crypto/blockchain, and the macroeconomics of political policy.
- Spearheading IEFS Digest as Chief Editor & Writer to publish articles on topics like market technical analysis, oil futures, recession indicators, etc. (medium.com/umd-iefs-online-content) (10 articles already published! More coming soon!)
- Creating an educational, data science-oriented branch of IEFS to help members break into quantitative finance roles and attract new members from technical backgrounds to diversify the #1 rated club at the Smith School of Business.

INTERESTS: Fantasy Novels (Tolkien, GRRM), Hip-Hop, Chess, Guitar, Basketball (LeBron!), & Skateboarding