

# Alexander Muehleisen

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## EDUCATION

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**Claremont McKenna College**, Claremont, CA

Graduation: December 2022

- *BA in Data Science* | GPA: 3.6/4.0
- *McKenna Achievement Merit Scholarship* (one of 15 recipients in the class of 2022)
- *Study Abroad: University of Cape Town*, South Africa | GPA: 3.7/4.0

July 2022 – December 2022

## TECHNICAL SKILLS

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- *Computer Languages*: Python, SQL, R, JavaScript, Java, MATLAB, Bash
- *Tools*: Databricks, AWS, PostgreSQL, Apache Spark, Docker, Tableau, Power BI, Git
- *Skills*: Predictive Modeling, Machine Learning, Data Warehousing, ETL Pipelines, Data Visualization, API Tools, CI/CD

## PROFESSIONAL EXPERIENCE

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**German Football Association (DFB)**, *Data Science Intern* | Frankfurt, Germany

April 2023 – Present

- Simulated the Euro 2024 Qualifiers using an XGBoost model to predict the 24 teams to qualify, improving resource allocation for the tournament by up to 20%; subsequently simulated the actual tournament to predict which teams Germany would most likely face, providing strategic insights for friendly match scheduling decisions ahead of the tournament
- Reduced data ingestion expenses by 50% by championing, and then implementing, a transition from a PostgreSQL-based data infrastructure to one that leverages the capabilities of a serverless Databricks SQL Warehouse
- Worked closely with Match Analysts to create, improve, and automate scouting tools, reducing manual effort by up to 40%
- Expanded data tracking capabilities by 2% through the implementation of pipelines to integrate various new data sources
- Completed various ad-hoc requests from the first team coaching staff, often delivering results under strict time-constraints

**Los Angeles Dodgers**, *Data Consultant* | California, USA

January 2022 – June 2022

- Developed several logistic, polynomial, and random forest models trained with and without spin profile characteristics to determine whether batted-ball spin contributes to quality of contact in baseball
- Presented a comprehensive, self-created R package and a Power BI Dashboard with key findings to the Dodgers R&D team

**Crestron Electronics**, *Data Engineering Intern* | New York, USA

May 2021 – August 2021

- Reduced business-processing times by 20-30% by constructing a platform to automate Project Intake at Crestron, providing a centralized database to manage projects and automatically assign relevant BPs to New Project Approval flows on Azure
- Integrated the Power BI REST API with Microsoft Power Automate and PowerPoint to allow users to instantly generate a complete, multi-slide PowerPoint Presentation with specific and relevant information about their Project

**RxRate – an RxAll Company**, *Co-CEO* | Remote

August 2019 – January 2020

- Coordinated the RxRate website launch (Sep. 2019) and monitored its performance with Google Analytics and the Firebase SDK, achieving a bounce rate of 18%, a pages/session ratio of 2.73, and an average session duration of 00:03:15

**RxAll**, *Software Developer Intern* | Yangon, Myanmar

May 2019 – August 2019

- Developed a map-based web-app (RxRate) with the Google Maps API, Node.js, and MySQL that helps people find safe pharmacies and avoid counterfeit drugs in developing countries – iterated with feedback from UI/UX testing
- Secured sign-ups to RxRate from over 20 pharmacies in Yangon, through sales pitches and product demonstrations

## INDEPENDENT TECHNICAL PROJECTS

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**Senior Thesis**, *'How COVID-19 Impacted Tertiary Education: Predicting the Educational Infrastructure of the Future'*

- Evaluated 4.5 million observations using multiple linear/logistic regression, random forest, and SVM classification

**Developing a Highly Scalable Web Search Engine**

- Achieved a webpage rendering time of 0.006s using WARC files from the multi-petabyte common crawl dataset

**Scanning all Geotagged Tweets in 2020 to Monitor the Spread of COVID-19 on Social Media**

- Analyzed a dataset of over 1.1 billion tweets using MapReduce to create parallel code and work with multilingual text

## SKILLS AND INTERESTS

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- *Language Fluency*: English (fluent) | German (fluent) | French (intermediate) | Afrikaans (elementary)
- *Competitive Sports*: Claremont Cougars Lacrosse (3 years) | TASIS England Varsity Soccer (3 years), Captain (1 year)
- *Competitive Traveling*: Traveled to and explored over 65 countries worldwide
- *Soccer Certifications*: FA Talent Identification Certificate (Level 1) | StatsBomb Analysing Football using Video