

# Benjamin McGinn

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## EXPERIENCE

**Bank of Montreal (BMO), Chicago, IL**

**March 2022 – February 2024**

*Technical Analyst – Junior Architect*

- Built complex software architecture diagrams for various BMO projects including cloud initiatives, data migrations, data pipelines, and internal team integrations.
- Designed and implemented hybrid cloud-based solution allowing SMS OTP as a form of authentication in BMO branches and contact centers. Collaborated with internal teams and external vendors to leverage existing software within the bank to lower overhead while simultaneously implementing a solution to minimize fraud activity in the bank. Tech utilized: AWS Lambda, Kafka, AWS RDS, AWS API Gateway.
- Developed and implemented internal API utilized to automate process of credit card rate conversions for our acquisition of Bank of the West Customers. API automated the creation of unique rate conversion templates that were then converted to correspondence letters, correspondence was then sent out to BotW's ~1.8 million customers. Technology utilized: Python (pandas, BeautifulSoup, Requests, Tornado), MySQL DB, AWS Batch.
- Assisted in design and execution of data lake merger between compatible organizational units during BMO's acquisition of BoTW. Ensured data was transported efficiently and securely. Technology utilized: PySpark, SQL, AWS Glue, AWS S3, AWS LakeFormation.

**HCA Healthcare, Nashville, TN**

**May 2021 – October 2021**

*ITG IT Pathways Intern – Application Engineer*

- Debugged problems within HCA's PamExpress .NET web application, thoroughly tested attempted fixes, and deployed tested solutions into Prod.
- Modified existing MVC application to fix present errors around cookie management, active directory, improper logging and analytics. All fixes were written in C#, branches committed in GitHub, application deployed in MS Azure VM. Technologies utilized: C#, Postman, Visual Studio, ASP.NET, Git, Azure Services.

**Manderson Graduate School of Business (University of Alabama), Tuscaloosa, AL**

**August 2020 – June 2021**

*Graduate Student Research Assistant*

- Sufficiently scraped the websites of the U.S. Securities and Exchange Commission to create data reports of companies 10-K reports to determine which companies regard cyber security as a threat to business.
- Developed Python scripts to crawl, scrape, and store indelible data from the SEC's publicly available 10-K reports. Formatted and analyzed data using NLP in order to develop numerous metrics for individual company reports, visualizing data appropriately. Technology utilized: Python (Requests, BeautifulSoup, Numpy, Pandas, NLTK, Wordcloud), Jupyter Notebook.

## EDUCATION

**The University of Alabama, Tuscaloosa, AL**

**December 2021**

*Masters of Science in Management Information Systems*

GPA: 3.81/4.00

*Bachelors of Science in Management Information Systems*

*Major: Management Information Systems, Minor: Computing Tech and Applications*

## CERTIFICATIONS & PROJECTS

**Databricks Certified Data Engineer – Associate**

**May 2024**

**AWS Certified Solutions Architect – Associate**

**February 2024**

**AWS Certified Cloud Practitioner**

**December 2023**

**[PCAP-31-03] PCAP – Certified Associate in Python**

**March 2023**

**[PCEP-30-02] PCEP – Certified Entry-Level Python**

**December 2022**

**Algorithmic NFL Game Spread & O/U Selector**

- A live, hosted website built entirely in Python using Flask framework, Jinja template engine, and multiple libraries like Pandas, bs4, re, datetime, requests, and more. Site is purposed to scrape live NFL team and player data, then process that data through self-created algorithm. The site then scrapes betting line data from major US sportsbooks and compares algorithms results with the offered spreads and over/under lines.

## TECHNICAL EXPERIENCE & HONORS

**Proficient:** SQL, Python: OOP, API Development, Web-Scraping, PySpark, Front-end, Back-end, and Database, TensorFlow.

**Intermediate:** Apache Airflow, Apache Kafka, Java, C#, HTML/CSS, JavaScript (React and Redux).

**AWS Tools:** EC2, Glue, LakeFormation, Batch, S3, DataSync, API Gateway, RDS, Athena, QuickSight.

**Business Tools:** Databricks, Visio, Gliffy, Confluence, Jira, Visual Studio Code, Tableau

**Achievements:** Destination Digital Finalist – BMO Hosted Internal Hackathon (UA), Faculty Scholar Award - Delivering top rated Graduate Research Assistant project, UA Scholar Scholarship Recipient