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## Experience

### Instantour

June 2024 - Current

Full Stack Developer

#### Project Migration & Database Management:

- Led the full stack migration of the C# web application from ASP.NET 5 MVC to ASP.NET Core 9, modernizing the codebase for performance, security, and maintainability.
- Refactored identity authentication, redesigned controller and view architecture, and resolved breaking changes across Entity Framework Core, models, routing, and Razor Pages.
- Consolidated multi-context database structure, resolved model compatibility issues, wrote SQL migration scripts to preserve existing data across schemas, and managed the database on Azure SQL Server.
- Deployed updated application on Azure Cloud, improving startup time, deployment reliability, and long-term support.

#### API Integration & Feature Expansion:

- Integrated third-party authentication systems including Google, Facebook, Microsoft, X (formerly Twitter), and Spotify.
- Implemented Spotify playback and dynamic playlist selection for use within personalized tour experiences.
- Migrated AI-powered features from Google Gemini to DeepSeek AI, and integrated new DeepSeek functionalities for enhanced user interaction.

### U.S. Bureau of Fiscal Service - Office of the Chief Data Officer

June 2023 – March 2024

Intern: Data Governance / Data Management / Data Engineering

#### TreasuryDirect Savings Bond Documentation Transfer Automation:

- Fully automated the Treasury savings bond transfer documentation process. This involved cleaning raw text data, transferring and uploaded it to an Access database on a schedule, saving ~3 hours of daily manual work.
- Generated weekly/monthly metadata report cycles which highlighted demographic and buy/sell trends.

#### Data Exchange Metadata Analysis Working Group:

- Spearheaded comprehensive metadata analyses on the Bureau's data exchange infrastructure and patterns using Dash & Power BI dashboards, Salesforce databases, and advanced KPI, ROI, & opportunity cost metrics.
- Participated in the Bureau's data exchange working group and advocated for the modernization and automation of data strategy through seminars and presentations.

#### Salesforce CRM Ticketing Management:

- Developed a system blending automated categorization and human intervention to sort ticket requests efficiently.
- Utilized machine learning NLP vectorization methods such as Doc2Vec and TF-IDF.
- Harnessed sentiment analysis techniques to effectively categorize topic, satisfaction, and urgency.

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## Projects

### Fantasy Disc Golf Web Application:

May 2025 – Current

- C# ASP.NET Core MVC web app that uses PDGA API requests to fetch professional tournament player statistics.
- Users can login via third-party authentication, create their own league/team, invite other users, add players onto their team, customize league settings, and compete against each other.
- Users, leagues, teams, and players are stored in a database with Entity Framework Core.
- Razor views use JavaScript and CSS to show interactive tables, toggle/change settings, and navigate the site.

### San Diego Association of Governments - Activity Based Travel Model:

September 2023 – March 2024

- Predicted vehicle choice with the 2017 National Household Travel Survey by using decision tree, random forest, and regression models to predict each vehicle's type, fuel type, and age.
- Predicted trip destination using SANDAG's synthetic population and census data using a parameter-tuned decision tree classifier with an accuracy and F1 of ~72% predicting over 240 classes while decreasing runtime by ~90%.

### Rent the Runway - Clothing Size Recommender System:

September 2022 – December 2022

- Fitted an unsupervised learning algorithm to predict a user's most comfortable size based on their clothing reviews.
- XGBoost regressor model producing a mean-squared error of 17.91.

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## Education

### University of California San Diego

- Data Science Master's Online (Graduating March 2026) | GPA: 3.85
- Data Science B.S. | Political Science Data Analytics Minor (Graduated 2024)

**Relevant Courses:** Data Structures & Algorithms, Theoretical Foundations for Data Science, Systems for Scalable Analytics, Recommender Systems & Web Mining, Representation Learning, Probabilistic Modeling & Machine Learning, Data Visualization

## Certifications

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**AWS Certified Machine Learning Engineer – Associate**

Expires: October 28, 2027

## Skills

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**Cloud & DevOps:** Microsoft Azure, AWS, GCP, GitHub Actions, CI/CD Pipelines, OAuth Integration, API Development

**Software & Data Tools:** PostgreSQL, Access, Salesforce, Power BI, Excel, Visual Studio, Jupyter, LaTeX

**Data Engineering:** ETL, Data Wrangling, Relational Databases, Metadata Management, Task/Data Parallelism

**Machine Learning:** Supervised/Unsupervised Learning, Feature Engineering, Recommender Systems, NLP, Sentiment Analysis

**Programming Languages:** Python, SQL, R, C#, Razor, HTML, CSS, JavaScript, VBA

**Frameworks & Libraries:** ASP.NET Core, Entity Framework Core, Pandas, Scikit-Learn, TensorFlow, PyTorch, PySpark, Dask