

# KARLEY HERSCHELMAN

## MACHINE LEARNING ENGINEER

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Results-oriented data science professional with experience leading key growth initiatives building engineering and product teams. Known as an expert in utilizing technical expertise to deliver innovative, high-quality, cost-effective solutions and strategies that increase revenue and transform business in fast-paced environment. Passionate, committed, and enthusiastic with proven progressive career reflecting strong leadership experience. Highly praised for being self-starter and independent worker who loves collaborating with business and technology stakeholders to understand and harness the power of data .

### CORE COMPETENCIES

- Data Analytics & Modeling
- Data Science & Machine Learning
- Prototyping Solutions
- Roadmapping
- Strategic Communication
- Coordination & Innovation

### PROFESSIONAL EXPERIENCE

#### UNIVERSAL PARKS AND RESORTS

January 2018 - present

**Data Scientist**, promoted February 2019

*Collaborated with campaign management teams to design, implement, and test models for personalized email campaigns.*

- Led design and implementation of model automated scoring process by aligning the teams models, designing functions for the team to use and assigning work in github.
- Experimented with and utilized ensemble methods, regression models, and neural networks as well as hypertuned models to minimize bias and variance.
- Led design of AWS consumption layer by gathering requirements from various marketing analytics teams and working with IT to put these requirements together.
- Automated finalized models to incrementally update to simplify related email sends in the future and be able to compare results.
- Teamed with senior management to better allocate money spent on third-party demographic data.
- Enhanced data with business context by feature engineering and prepping features.
- Hypertuned variable gain and minimized overfitting of XGboost models.

#### **Programmer Analyst/Hadoop Data Engineer**, January 2018 to February 2019

*Collaborated on pricing optimization system for revenue management, conducted wait times research for park operations, and developed real time dashboard for park operations.*

- Worked with Director of Revenue Management to build, document, and validate linear regression and forecasting statistical models for pricing optimization solutions.
- Delivered knowledge transfer sessions to business users and support teams prior to putting the solution into production.
- Developed solutions with ERDs, data ontologies and data ingestion plan.
- Contributed to research project to evaluate guest Wifi connectivity data as an alternative to purchasing 3rd party products for measuring ride wait-times.
- Utilized Linear Regression and ARIMA models to analyze accuracy of wait time estimates and wait time predictions.
- Wrote research paper documenting specific findings and data quality improvement strategies and presented findings and recommendations to executive sponsors in Park Operations.
- Collaborated with Innovation and Park Operations teams to explore opportunities for solutions to provide real-time trending and forecasting of critical business measures such as ride wait times, guest satisfaction scores, ride operations staffing, ride attendance and guest crowd control (paths).
- Worked with senior managers in Park Operation to review prototypes and refine solution requirements.

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## INTERNSHIP EXPERIENCE

### UNIVERSAL PARKS AND RESORTS

January 2017 - January 2018

- Built data ingestion solutions to source data into the enterprise Data Lake.
  - Ingested guest Wifi connectivity data from Cisco CMX routers and Comcast Xfinity portal.
  - Implemented solution for weather data from NOAA and Weather Underground APIs.
- Utilized Hadoop stack (Hive, HDFS, and HBase) using Spark streaming and Nifi.

### JM FAMILY ENTERPRISE, SOUTHEAST TOYOTA (SET)

Summer and Winter 2016

- Assisted SET Data Management team with data visualization prototypes built in Tableau in areas of Dealer Retention and Churn Rate.
- Supported development of the enterprise Data Catalog using Collibra.

### GENERAL ELECTRIC TRANSPORTATION

May 2014 - November 2014

- Added globalization to enable localization features to C++ code base of the Train Control Panel application to enable end-user to select display text and language.

### HARRIS CORPORATION

May 2013 - July 2013

- Built data ingestion solutions to import data from received Excel files into SQL Server. Utilized SQL, SSIS, SSRS, and some VBA.

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## EDUCATION & CERTIFICATIONS

### MASTER OF SCIENCE IN DATA ANALYTICS

May 2018

University of Central Florida, Orlando, Florida

- Graduate Teaching Assistant, August 2016 to December 2016

### BACHELOR OF SCIENCE, Dual major Computer Science and Mathematical Science

May 2016

Florida Institute of Technology, Melbourne, Florida

- Treasurer, Student Government, 2014-2015
- Chief Justice, Student Government, 2015-2016
- Treasurer, Society of Women Engineers, 2015-2016
- Vice President, Kappa Theta Epsilon, 2015-2016
- Treasurer, ACM (Association of Computing Machinery), 2015-2016

Improving Deep Neural Networks Certification, *Coursera*, August 2019

- Hyperparameter tuning, Regularization, and Optimization

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## TECHNICAL KNOWLEDGE & SKILLS

**Machine Learning:** Xgboost, Tensorflow, Clustering Techniques, Regression Analysis, Neural Networks, Word Vectors, CART, Time Series Analysis, K-means, KNN

**Data Engineering:** Pyspark, Spark, Hadoop, AWS, SQL, JSON, Apache Nifi, Spark, HBase, Hive, HiveQL, Kafka, Python, R

**Software Development:** Python, R, Java, Linux, Git, Tableau

**Team Communication:** Agile, Scrum, Logical/Physical Models, Design Documents, Data Governance, Data Lineage