

# Justin Barry

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## OBJECTIVE

Data scientist with an MS in Computer Science and 10+ years of experience delivering creative software solutions. I am experienced in conducting research and implementing machine learning solutions to solve business problems in the real world.

## SKILLS

Data science/machine learning, advertisement optimization, A/B testing, Bayesian statistics, deep learning, regression analysis, multi-armed bandits, distributed computing, AWS, Natural language processing, computer vision

## PROFESSIONAL EXPERIENCE

### Contract Data Scientist Barry Solutions LLC

Aug 2022 – Present

Due to my lifelong passion for professional martial arts, I made the decision to leave my full-time position with Amazon and focus solely on my career as a professional MMA fighter. This required my complete dedication and focus in order to properly prepare for events at the time.

During this period, I also took on some contracting work for a friend. I developed an innovative model for an MMA podcast, which utilized fighter data from [ufcstats.com](https://ufcstats.com). Using my expertise in machine learning, I created a program that processed and analyzed the data to accurately predict the outcomes of UFC fights. This project allowed me to stay connected to my passion for martial arts while also utilizing my skills as a machine learning scientist.

### Machine Learning Scientist Amazon.com – Remote

May 2019 – July 2022

As an Applied Scientist at Amazon Prime Video, I led AI and machine learning efforts for a team focused on optimizing cover art for titles in the catalog. In this role, I researched and experimented with ML models offline using PyTorch, scikit-learn, Pandas, PySpark, and AWS SageMaker. Working closely with the product intelligence team, I designed products and increased product quality by leveraging marketing and product insights. By driving a 2.9% increase in worldwide streams through our artwork recommendation systems, I demonstrated my expertise in advertisement optimization.

My proficiency in a range of techniques and tools enabled me to excel in my role, including using Spark with AWS SageMaker Studio to analyze very large datasets and researching and experimenting with multi-armed bandit models in both offline and online settings. I implemented Bayesian Logistic Regression in PySpark to work in a distributed environment and advised on AB testing, determined statistical power and customer randomization, and used a variety of methods such as deep learning, reinforcement learning, logistic regression, and other classic ML models to predict title cover art for a customer. Finally, I developed a clustering model of Prime Video titles using Latent Dirichlet Allocation and Wasserstein Autoencoders to create topic-model embeddings of customer review data.

### Senior Software Engineer CSRA Inc – Falls Church, VA

2013 – 2017

As a senior software engineer at CSRA Inc, I led the development of robust and deployable enterprise applications in an agile environment, mentored junior developers, and acted as a technical lead for multiple major applications. My

contributions were recognized through an award of excellence for my work on the International Terrorist Victim Expense Reimbursement (ITVERP) application. I developed and demoed prototypes using new technologies, such as creating REST services and Java libraries using the Java stack, designing a database testing library using a Docker client and Liquibase, and demoing a Java Spring-based rules engine prototype. I also assisted in mid-tier application server management, implemented RESTful and SOAP web services across multiple platforms, and utilized Spring, Hibernate, REST, and SOAP technologies to create enterprise-level applications.

### **Software Engineer**

**2011 – 2013**

Booz Allen Hamilton – Herndon, VA

As a software engineer at Booz Allen Hamilton, I developed and maintained enterprise web applications and utility software, created custom algorithms to solve coding problems, and resolved application bugs. I also managed and mentored junior consultants, secured government clients, and assisted in research efforts. My contributions led to an award of excellence for my work on the Talent Review Tool, and I actively participated in various design sessions, code reviews, and sprint planning/backlog-grooming sessions. Additionally, I implemented SOAP web services and contributed to mobile rapid prototyping effort

## **EDUCATION**

### **Master of Science in Computer Science,**

**May 2019**

*Gem Fellow*

University of Central Florida – Orlando, FL

### **Bachelor of Science in Computer Science and Mathematics,**

**May 2011**

*Member of Pi Mu Epsilon Honorary Mathematics Society*

Christopher Newport University – Newport News, VA

## **PUBLICATIONS**

*Diagnosing Schizophrenia: A deep learning approach.* BCB '18: Proceedings of the 2018 ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics. August 2018 Pages 549. <https://dl.acm.org/doi/10.1145/3233547.3233658>

## **COMPETITIONS & PROJECTS**

*2<sup>nd</sup> highest scoring model accuracy.* 2018 CFE Federal Credit Union Lending Analytics Competition. [https://github.com/shere-khan/cfe\\_competition/blob/master/report.pdf](https://github.com/shere-khan/cfe_competition/blob/master/report.pdf)

GitHub repository [https://github.com/shere-khan/machine\\_learning](https://github.com/shere-khan/machine_learning)

## **ADDITIONAL SKILLS**

Data science, regression analysis, statistical modeling, sentiment analysis, neural networks, computer vision, topic modeling, distributed computation, Apache spark, functional programming, computer vision, reinforcement learning, optimization, gradient boosting, Keras, PyTorch, pandas, random forest EMR, Apache Spark, R, Jupyter, PySpark, multi-armed bandits, A/B testing, data analysis, REST, AWS SageMaker Studio, Jupyter notebooks, logging policies, Java Spring, Java Struts, Node JS, Hibernate, JavaScript, Python, C, Scala, functional programming, SQL, Tomcat