

# 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.

## PROFESSIONAL EXPERIENCE

### Contract Data Scientist

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 to properly prepare for events at the time.

During this period, I also took on some contracting work. 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 using decision trees (XGBoost). 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

May 2019 – July 2022

Amazon.com – Remote

- Led AI and machine learning initiatives for a recommendations team at Amazon Prime Video, developing and deploying data-driven solutions to improve customer experience.
- Collaborated with cross-functional teams, including product intelligence, to exchange marketing and product insights, demonstrating the ability to work effectively with diverse stakeholders.
- Drove a 2.9% worldwide increase in streams through the team's artwork recommendation systems, showcasing the ability to generate actionable insights and drive decision-making through data mining techniques.
- Conducted extensive offline experimentation with ML models, demonstrating strong knowledge of machine learning and statistics, and the ability to draw rigorous conclusions from data through statistical inference.
- Utilized Spark with AWS SageMaker Studio to analyze very large datasets, demonstrating proficiency in SQL and Python.
- Researched and experimented with multi-armed bandit models in both offline and online settings, showcasing experience in applying machine learning models in an industry setting.
- Implemented Bayesian Logistic Regression in PySpark in a distributed environment, demonstrating proficiency with deep learning frameworks.
- Advised on AB testing, determining statistical power and customer randomization, demonstrating the ability to balance rigor with practicality.
- Utilized methods such as deep learning, reinforcement learning, logistic regression, and other classic ML models to predict title cover art for a customer, showcasing experience in real-time natural language processing (NLP) and text analysis.
- Developed a clustering model of Prime Video titles using Latent Dirichlet Allocation and Wasserstein Autoencoders to create topic-model embeddings of customer review data, showcasing intellectual curiosity and innovation.

**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,**  
*Gem Fellow*

May 2019

University of Central Florida – Orlando, FL

**Bachelor of Science in Computer Science and Mathematics,**  
*Member of Pi Mu Epsilon Honorary Mathematics Society*

May 2011

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, product insights, problem-solving, collaboration, communication, education, social impact, working with cross-functional teams, good business judgment, 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, Natural Language Processing (NLP), Semantic Search, Image Recommendations, Optimal Ranking, Deep Learning Techniques, High Performance Machine Learning Libraries, Deep Learning Frameworks (PyTorch, Tensorflow), ML Driven Products, Technical Research, Production Grade Development, Data Science/Analytics Programming Language (Python, R), General-Purpose Programming Language, Scalable Distributed Products, Batch, Real-Time, and Streaming Machine Learning Products, Functional Programming Development Skills, Anti-fraud initiatives, Anti-abuse initiatives, Trust and Safety product group, Mitigate impact of bad actors, Exploratory analysis, Data mining techniques, Reduce harm, Non-technical communication, Empathy, Technical excellence, Industry setting machine learning application, Text analysis, Deep learning frameworks, Balance of rigor and practicality