

Freddy Ray Drennan

812 Cameron Drive, Severance, CO 80550

+1 254 931 8313 | drennanfreddy@gmail.com | ndexr.com | [fdrennan](https://www.linkedin.com/company/fdrennan) | [freddydrennan](https://www.youtube.com/channel/UCv33333333333333333333)

Dear Hiring Manager,

I am a multi-language, Agile data scientist with substantial knowledge in data architecture and optimization methods, an overwhelming git commit history, and love for infrastructure from the origination of data to the final interpretation and presentation of it. Before data science, I was an Army trauma nurse in a Forward Surgical Team working in Afghanistan at the height of the war. I frequently speak at meetups, teach junior data scientists about best practices, work within a production environment, and created a semi-public data science and engineering community focused on generating data from Reddit.

Data science begins with capable architecture, and many teams are lazy in this regard. I hope to find a company that has a strong data foundation. Or, one that is willing to work hard with me towards correcting foundational data integrity issues so that the models I build or direct for the company result in surgical decision making.

At Digital First Media, I worked in an environment which focused intensely on architecture, which allowed me to create a fully automated cross-channel advertising budget optimizer using a mathematical method called linear programming. After formulating the mathematics and data pipeline, I built an R API which published the results back to each platform. This model resulted in a 2 million dollar increase in revenue within the first few months of use. Human resources were no longer a constraint, and advertisers could be added ad infinitum.

Feel free to poke around on NDEXR.com, the hub I created for the online community. I can open up private routes to you or your team-members interested in digging into my work if their IP address is shared with me - private ports running Airflow and Postgres require white-listing and minor administrative clearance.

I appreciate your time and hope to hear from you soon.

Freddy

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EDUCATION AND QUALIFICATIONS

2014–2017	BBA Quantitative Finance with Minor in Math	The University of Texas at Austin
2007–2008	Licensed Practical Nurse - Compact State License	Army Medical Department Center & Schools
2006–2007	EMT - Combat Medical Technician	Army Medical Department Center & Schools

EMPLOYMENT HISTORY

2019–	Business Analytics Manager , Logisticare	<i>Showed predictability in overcharges 90+ days out</i>
2018–2020	Data Scientist , Digital First Media	<i>Increased profit by \$2M with linear programming</i>
2017–2018	Data Optimization Engineer , Digital First Media	<i>Maintainer of Quantum R Package</i>
2016–2017	Student Mentor , University of Texas at Austin	<i>Taught R programming</i>
2010–2016	Pediatric / ICU Nurse , Pediatric Services of America	<i>Improved outcomes for pediatric seizure patients</i>
2008–2010	Trauma Nurse , 555th Forward Surgical Team	<i>War zone trauma nurse in Kunar, Afghanistan</i>
2007–2008	Military ICU Nurse , Darnall Army Medical Center	<i>Treated 1000+ critically ill patients</i>

PROJECTS/RESPONSIBILITIES

- **NDEXReddit Platform**
 - Lead developer and creator of a Reddit analytics platform using AWS, Python, R, and Docker - **Repo Here**
 - Aggregates all submissions to Reddit for bad-actor analysis using Airflow and Postgres
 - Working in coordination with **Social Forensics** to cross-correlate misinformation on Twitter and Reddit
- **Logisticare Auto-Assignment**
 - Formulated mixed-integer program (MIP) to match riders with transportation providers
 - Structured model to run off a containerized, load-balanced, R API
 - Provides improved and up-to-date transportation recommendations
- **Overrides Classification**
 - A \$300K/day problem with high class imbalance and regional variance requiring a multi-model approach
 - Predicted 80%+ of the positive class using clever feature engineering
 - Allowed Logisticare to begin determining problematic transportation providers to renegotiate contracts
- **Omni-Channel Advertising Optimization**
 - A solo data scientist on a team with four front-end developers
 - Decreased campaign management time from one hour to five minutes per campaign
 - Developed unified and coordinated optimization processes between Adwords, Facebook, and TTD
 - Integrated campaign management linking between Salesforce, Data Warehouse and Quantum platform
- **Adtaxi Mathematics System Administrator**
 - Maintained production servers and administration for the Quantum backend
 - Managed users, software upgrades, deployment, and applications on production servers.
 - Built an R API framework which prevented the need for RSConnect and resulted in \$50K/year savings
- **QuantumR Package**
 - Manages search budget pacing - forces advertising campaigns to spend evenly over a given period
 - Optimizes single-channel Trade Desk / Facebook Campaigns - boosts conversions per dollar
 - Implemented Continuous Integration / Unit Testing
- **Building A Highly Scalable Load Balanced R API**
 - Uses Docker Compose and NGINX to route traffic from an endpoint to various endpoints
- **Creating Index Funds Using Integer Programming and Stratified Samples**
 - Given a sample of n stocks, selects k stocks to represent the whole
- **Distributed Machine Learning by Hand with R and Caret**
 - Built EC2 servers to send ML data to AWS and run 40+ models in parallel
 - The entire ML framework was developed by myself
 - Shows familiarity and comfort leading/developing machine learning models