

# Freddy Ray Drennan

Curriculum Vitae  
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📍 812 Cameron Drive, Severance, CO 80550  
🏠 drenr.com  
☎ +1 254 931 8313  
✉ drennanfreddy@gmail.com  
🐦 @fdrennan  
🌐 fdrennan  
🌐 freddydrennan

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

## Projects/Responsibilities

- **NDEXR Platform**
  - Building a data science analytics platform using AWS, React, Python, R, Bash, and Docker
  - Launches customized pre-built servers I have created tailored specifically for data scientists who need flexible compute (GPU, Cores) at scale
  - Puts the data scientist in charge of compute scale with pre-defined business requirements
  - Includes user management, log in, and security considerations
- **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
  - Supplements existing infrastructure by providing 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 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 Trade Desk
  - 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