Freddy Ray Drennan

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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

2020–	**Senior R Programming Consultant**, BioMarin	*Built Centralized Statistical Monitoring Solution*
2020–	**Founder**, ndexr.com	*A Khan Academy for R Programmers*
2019–2020	**Business Analytics Manager**, Logisticare	*Showed predictability in overcharges 90+ days out*
2018–2020	**Data Scientist**, Digital First Media	*Increased profit by $2M with linear programming*
2017–2018	**Data Optimization Engineer**, Digital First Media	*Maintainer of Quantum R Package*
2016–2017	**Student Mentor**, University of Texas at Austin	*Taught R programming*
2010–2016	**Pediatric / ICU Nurse**, Pediatric Services of America	*Improved outcomes for pediatric seizure patients*
2008–2010	**Trauma Nurse**, 555th Forward Surgical Team	*War zone trauma nurse in Kunar, Afghanistan*
2007–2008	**Military ICU Nurse**, Darnall Army Medical Center	*Treated 1000+ critically ill patients*

Projects/Responsibilities

- **Centralized Statistical Monitoring**
  - Lead developer for implementing an R/Shiny back-end to test data integrity for research trials
  - Worked with the head bio-statistican to create a plugin system for incorporation of new analyses
  - shinydashboard as package, tested using shinytest, rselenium. Developed with golem (usethis of Shiny)
  - `csm` package fortified with travis, testthat, vignettes. Documented with roxygen2
- **ndexr.com**
  - Lead developer and creator of a Reddit analytics platform using AWS, Plumber, and Shiny
  - Converted infrastructure into an e-learning platform, where I teach R in production systems.
  - Shiny app developed with shinydashboard, golem , elasticsearchr.
- **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
- **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