

# Trevor C. Allen

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## **Summation**

With multiple years' experience in data analysis, research, and programming as a part of agile cross-functional teams of Data Scientists, Developers, and Research Assistants, I offer a broad range of technical skills combined with comfort and experience interacting with clients and partner organizations. Having experience as both a team leader and member, I've coordinated and participated in data integration efforts large and small, analysis and validation of new and existing predictive models, establishment of MVP requirements and subsequent user acceptance testing, and more. I'm actively seeking new opportunities and clients in an energetic, innovative community with which to engage in meaningful, purpose-driven work.

## **Computer & Programming Skills**

*Languages:* Python, R, git, SQL (MySQL, Oracle, MS-SQL), Ruby, bash, MATLAB, Java

*Platforms:* Apache Hadoop, HBase, Hive, Impala; Linux (desktop/server); AWS, Heroku, & OpenShift hosting

*Software & Programs:* ESRI ArcGIS, Eclipse, Office suites (Microsoft, OpenOffice), STATA, EViews

## **Data Science & Statistical Analysis**

*Modeling:* regression (logistic, linear, mixed-effects), instruments, time-series/forecasting, AR/MA, GLM, etc.

*Libraries:* Pandas, NumPy, SciPy (Data); matplotlib, ggplot2, D3 (Visualization); Django, Web2Py (Web)

*Misc.:* Regular expressions, STM/Mapping, standardization, data mining & integration, ETL automation

## **Work Experience**

### **Valiance, Columbus, Ohio**

*Freelance Developer & Data Scientist*, January 2016 – present

Valiance, Ltd is the business face of my contracting, consulting, or other freelance work. While my current workload consists primarily of an “Internet-of-Things”-style hardware and software development project for a private client, I am actively seeking additional opportunities to engage with new clients. Please feel free to reach out to me if you would like to discuss working together or to learn more about my work.

### **Zenith Fitness, Ltd., Columbus, Ohio**

*Founder / Sole-Proprietor*, December 2014 – present

Zenith Fitness is a new startup aiming to revolutionize the fitness industry through technology and data-driven insight. We're currently in development on a combined data-collection and cloud-based analytics platform that centers on interoperability, flexible implementation, and process automation. Integrating a minimalist approach to hardware with the flexibility of cloud-based applications allows our product to take personalized fitness to the next level, creating new value for both members and owners/operators of fitness facilities alike.

### **Bohl Striping & Paving., Columbus, Ohio**

*Painting & Pavement Marking Technician*, May 2015 – January 2016

Bohl Striping – among the largest striping & painting companies statewide – applies striping, painting, layout & design planning, etc. for parking lots, warehouses, playgrounds & parks, athletic courts, garages, and just about anything else, from tiny 10-spot parking lots to Ohio State University's state champ tennis courts.

### **Explorys, Cleveland, Ohio**

*Data Scientist – Data Curation Team*, February 2013 – September 2014

- Developed and delivered reports on new and existing data integration projects covering dozens of clinical data systems containing billions of data elements, including both ad hoc analysis and automated regular reports.
- Frequently led communication efforts with both technical and non-technical clients regarding progress of pilot integration efforts, preliminary user acceptance testing, and on-going validation efforts during product rollout.
- Oversaw expansion of Data Curation and Data Integration teams from a few individuals to two dozen members, including training of new-hires, interns, external contractors, and cross-team collaborative training.
- Tapped for multiple “Tiger Teams” for key clients and high-profile projects, requiring daily meetings with team leads and senior leadership with weekly company-wide updates.

- Oversaw multiple projects simultaneously and coordinated efforts across teams; largely responsible for developing and maintaining teams' use of Atlassian JIRA to track efforts, requirements, and timelines.
- Individually and jointly mapped many new and previously-encountered EMR/EHR back-ends to our internal data model, with many hours of reviewing source-to-target mapping (STM) with technical and clinical clientele, spanning overarching “health of the data” discussions to field-by-field STM reviews.

**Kleinhenz & Associates, Cleveland, Ohio**

*Research Associate, December 2012 – September 2014*

- Regularly reported forecasts in business economics, with heavy focus on time-series estimation of quarterly and monthly national retail sales as well as modeling regional and statewide job growth in Ohio.
- Performed ad hoc research into improved modeling using basic and intermediate econometric methods such as splines, ARIMA, and comparing information criteria in STATA, EViews, and Python.

**U.S. Peace Corps, Yeghegnadzor, Vayots Dzor, Armenia**

*English & Economics Instructor, May 2012 – November 2012 (unpaid)*

- Led classroom instruction in English, Economics, and Finance at Secondary and Post-Secondary levels.
- Cooperated daily with Armenian Counterparts in planning, organizing, and leading lessons.
- Individually and team-taught 13 classes of 10-30 students each from 9<sup>th</sup> grade to graduate students.

**Department of Economics, Case Western Reserve University, Cleveland, Ohio**

*Research Assistant, July 2011 – May 2012*

- Collaborated with multiple PhD faculty on numerous small- and large-scale research projects simultaneously.
- Led data management for terabytes of data in various formats spanning years of gathering & manipulating.
- Directed a small team of research assistants – coordinated efforts by outlining workflow and delegation of projects, developed timelines, and regularly communicated progress and status updates to supervisors.
- Assisted in experimental design and gleaned new insight from existing experimental data.
- Re-coded and organized tens of thousands of lines of code representing thousands of man-hours of data analysis, automating processes and reducing run-time by an order of magnitude.
- Developed a platform for Internet-based participation in economics experiments including automated payments based on real-time results and incorporating database back-end.

**Department of Physics, Case Western Reserve University, Cleveland, Ohio**

*Capstone Research Project, August 2010 – May 2011 (unpaid)*

- Independent year-long research project applying qualitative and quantitative analysis to a unique topic.
- Evaluated data reliability & integrity in compiling data from various sources.
- Presented results to Physics Department panel and at judged poster session; received special commendation for accessibility to non-experts of poster & presentation and chosen to display at university events.

**Education**

**Case Western Reserve University (CWRU), Cleveland, Ohio**

*Bachelor of Arts: Physics, Economics – May 2011, cum laude*

*Senior Thesis: Macroeconomic Impact of Mobile Phones in the Developing World*

**Clinical & Healthcare Experience**

- Extensive data mining of EMRs, including: Epic/Clarity, NextGen, Cerner, Allscripts (Enterprise, Touchworks, & Professional) and custom data warehouses, covering both ambulatory and inpatient settings.
- Familiarity with many medical standards and ontologies such as SNOMED-CT, LOINC, RxNorm, ICD, CPT.
- Ensured fidelity of clinical data acquired and standardized from dozens of systems mapped to a single unified model built atop a distributed-computing framework of Apache Hadoop & HBase.
- Frequently investigated complex data-flow and processing methods to identify and resolve data loss, corruption, or misrepresentation within terabytes of data covering tens of millions of unique patient-lives.
- Participated in expansion of clinical data model to incorporate financial and transactional data elements.

**Honors**

Eagle Scout

President's Scholarship

Dean's Achievement Award in Economics

Wagnalls Memorial Scholarship

Dean's Honors List

Case Alumni Association Scholarship