



# Joshua Grant

Data Engineer











## contact

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## objective

to take theories, ideas, and experiments and turn them into production-scalable solutions

## development

Bash:	
Docker:	
HTML:	
JavaScript:	
L <sup>A</sup> T <sub>E</sub> X:	
Perl:	
PHP:	
Python:	
R:	
SQL:	

## flavors

R:	data.table	shiny
	tidyverse	vegan
	testthat	devtools
	DBI	leaflet
	httr	ggplot2
Python:	pandas	beautifulsoup
	PIL	xdgboost
	osgeo	rasterstats
		PostgreSQL
SQL/DB: MySQL		Hadoop
	MongoDB	
	SQLite	Snowflake
L <sup>A</sup> T <sub>E</sub> X:	tikz	fancyhdr
	tables	booktabs
JavaScript	code.js	angular.js
	vue.js	jQuery

## Statistics

ANOVA  
Linear Regression  
PCA/PCoA

## Experience

### Data Scientist Subcontractor

Oak Ridge National Laboratory, Oak Ridge, TN 2018 — Present

- Automating data ingestion of the WSTAMP webapp via the use of R, Python, Airflow, and Docker
- Authoring an R package to unify geography between online data APIs

### Owner & Contractor-For-Hire

Specrabella, Knoxville, TN 2018 — 2018

- Designing, developing, and deploying an interactive energy informatics web application that provides real-time calculation from machine learning derived models
- Consulting with clients on ground-up web application architecture, database and visualization needs
- Developed data ingestion methods using cURL, PHP, and R to scrape energy data from the web
- Streamlined training and development procedures using ansible, vagrant, PHP, and BASH

### Bioinformatician, Project Manager, & Technical Sales Representative

Microbial Insights, Knoxville, TN 2016 — 2018

- Established an automated pipeline using R, MySQL, Python, and Bash for NGS analysis, along with intranet website control written in JavaScript and Shiny
- Automated client-bound statistical calculations such as linear models, ANOVA, SOMs, clustering, PCA, and PCoA
- Developed an ETL customer data visualization tool using R, PHP, JQuery, and MySQL to view qPCR results in the context of other samples' and selected parameters
- Optimized data delivery to clients via a custom R package and local shiny applications to quickly generate L<sup>A</sup>T<sub>E</sub>X PDF reports
- Constructed, populated, and maintained an intranet wiki based using PostgreSQL and PHP to aid in project management and customer service

### Graduate Research Assistant, Dr. Neal Stewart's Plant Biotechnology Lab

University of Tennessee, Knoxville, TN 2014 — 2016

- Summarized statistical findings of cell suspensions using linear models, ANOVA, and PCA
- Evaluated suspension cultures via chemical and spectral processes for lignin formation and statistically analyzed and summarized my findings for inclusion in DOE reports
- Collaborated on a novel single cell suspension and cryopreservation robotic system

### Laboratory Assistant, Dr. Neal Stewart's Plant Biotechnology Lab

University of Tennessee, Knoxville, TN 2012 — 2014

- Developed automated statistical methodology for screening of lignin content and imaging of cell characteristics both *in vivo* and *in vitro*
- Extracted genomes from NCBI, cleaned and normalized the data, and performed exploratory data analysis

## Education

### Master of Science in Plant Sciences — Plant Molecular Genetics

University of Tennessee — Knoxville, TN — Spring 2017 — GPA: 3.72/4.0

### Bachelor of Science in Plant Sciences — Biotechnology

University of Tennessee — Knoxville, TN — Spring 2014 — GPA: 3.74/4.0  
Magna Cum Laude