

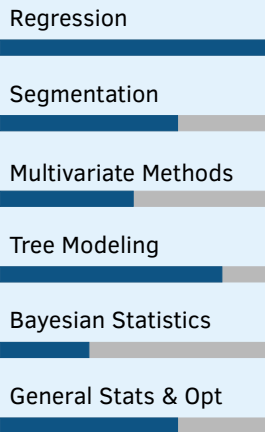


Christian Tillich

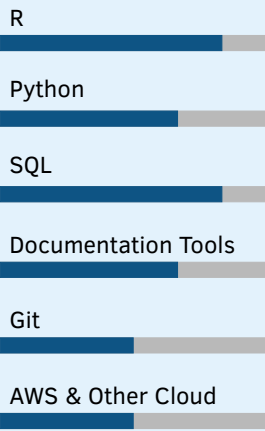
Data Scientist



Stats



Code



The skill scale is from 0 (Used Once in College) to 6 (Expert). 3 implies ability to plan and complete average tasks within accurate and reasonable timelines.

Work Experience

Numerator Data Science: Panel Science May 2020 - Present

- Designed AutoSeg - Instant marketing segmentation modeling with LLM-in-loop processes for naming and descriptions.
- Prototyped RNN-based tool to extract packaging type from images of CPGs.
- Designed Brand Strength Model - an SEM relating survey attitudes to actual market behaviors for individual panelists.
- Designed Allocation V4 - distribution based model relating Projected Sales to Projected Households
- Developed numerous internal tools to assist with day-to-day DS functions
  - Python wrapper for Insights API
  - Lightweight model development framework for rapid local experimentation.
  - Other DS tooling to improve Snowflake workflows.

Uptake Data Science: Assessments Mar 2019 - April 2020

- Constructed machine learning models to assist manufacturing clients in diagnosing and troubleshooting common failures on assets.
  - Anomaly detection models to capture errant behavior on stamping presses.
  - Rare-event prediction models to detect chock bearing and spindle failures for well-known steel manufacturer.
  - Unsupervised classification to clean operator labels in work-order data.
- Converted client engagements in the Mining and Manufacturing space.
- Assisted in efforts to evaluate new technologies relevant to Data Science work.

Avant Credit Data Science Jun 2016 - Mar 2019

- Constructed machine learning models for the portfolio, including:
  - Core underwriting model for prime population.
  - Competitor underwriting models using alternative consumer credit sources
  - Unsupervised segmentation model for targeted marketing.
  - Modeling suite to enhance refinance target logic.
- Monitored models performance for degradation, suggested remedies and rebuilds.
- Built, documented, and maintained a shared automated reporting toolset for the team.
- Built, documented, and maintained a tool for managing data preprocessing.
- Contributed to a repository of shared functions and tests.
- Trained and informally managed new team members

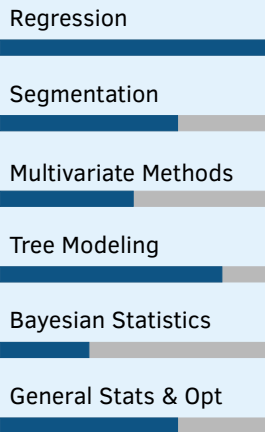


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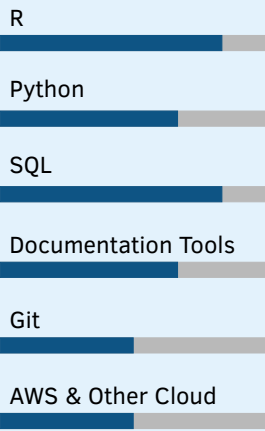
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Avant Credit      Business Analytics      Sep 2015 - June 2016

- Designed critical long-term risk forecasting tool.
  - Linear regression to turn unintuitive underwriting score into sensible 12-month risk metric
  - Custom curve-fitting optimization to map 12-month risk to marginal risk curve over life of loan.
  - Tool accurately forecast losses during a period of high risk and low access to capital.
- Performed investigative data analysis on several topics.
  - Optimal way to quantify debt to income.
  - Reverse engineering competitive products from credit report tradelines.

Enova Financial      Research & Platforms      Dec 2014 - Sep 2015

- Researched the efficacy of non-linear modeling strategies.
- Developed unsupervised learning model to tag call center notes on a variety of topics.
- Designed and maintained core analytics Data Mart.
- Evaluated the efficacy of voice-to-text translation software for call center.

Enova Financial      UK Business Analytics      Jan 2014 - Dec 2015

- Designed profit-maximizing loan amount optimization tool. Raised average loan amounts by \$60 and expected net return by 7%.
- Led all analytics efforts in major legal overhaul. Salvaged \$5 million in above worst-case scenarios.

Enova Financial      CA/AU Business Analytics      Aug 2010 - Jan 2014

- Identified and fixed key failures of underwriting engine.
- Created LTV calculator used to optimize digital marketing allocations.
- Informally managed team of 2-5 analysts working on different aspects of the underwriting engine.
- Identified and shut down *ad hoc* fraud pockets on the two products.

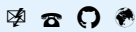
Enova Financial      Fraud/Operations Analyst      Jun 2008 - Aug 2010

- Developed critical reports that allowed us to open operations after massive fraud attack.
- Wrote and implemented a number of consistency checks to catch operational and development errors and report back to stakeholders.

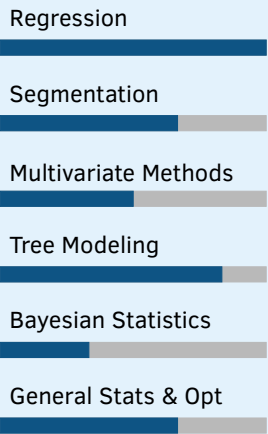


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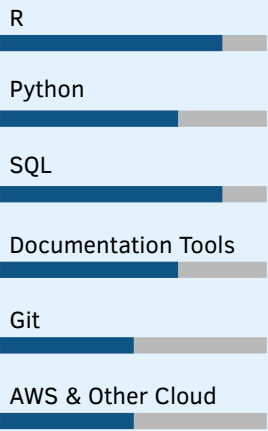
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## Academic Research

Research Assistant	Granato Research Team	Sep 2006 - Sep 2007
<ul style="list-style-type: none"><li>Prepared samples for experiments.</li><li>Prepared preliminary findings for NSF grant proposals.</li></ul>		
Research Assistant	CERI Research Team	May 2006 - Aug 2006
<ul style="list-style-type: none"><li>Wrote Matlab scripts to determine theoretical surface depth from excessive loading.</li><li>Wrote Unix shell-scripting to ETL raw GPS data into usable Matlab objects.</li><li>Presented research to peers at 2 day conference in Oregon.</li></ul>		

## Education

DePaul University	2012 - 2015
MS Statistics	GPA: 3.9/4.0
University of Illinois - UC	2004 - 2008
BS Physics, Minor in Philosophy	GPA: 3.6/4.0