

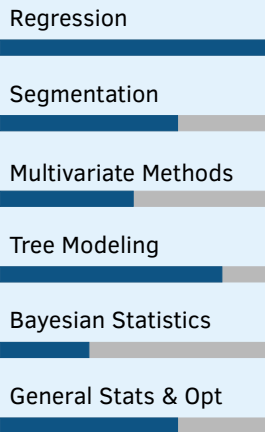


Christian Tillich

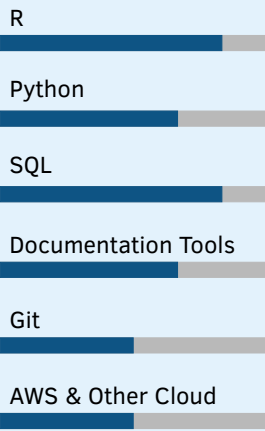
Data Scientist



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 and released new version of Allocation model.
 - Developed and maintained a library of known failures of the previous methods, with detailed causal analysis of failure modes.
 - Updated the distribution assumptions and calculation to align with industry best practices.
 - Developed production pipeline for model fitting, and orchestrated in Airflow.
 - Responded rapidly to feedback during UAT, iterating through numerous design considerations and edge cases to final implementation.
- Designed experimental Brand Strength model, connecting survey responses to actual market behaviors for participating panelists.
- 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

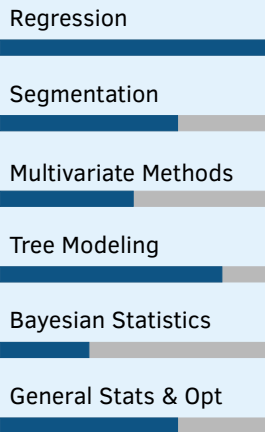


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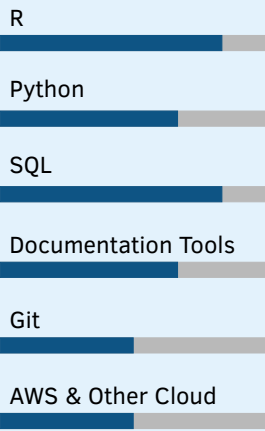
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Avant Credit Business Analytics Sep 2015 - June 2016

- 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.

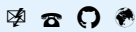
Enova Financial Fraud/Operations Analyst Jun 2008 - Aug 2010

- 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.

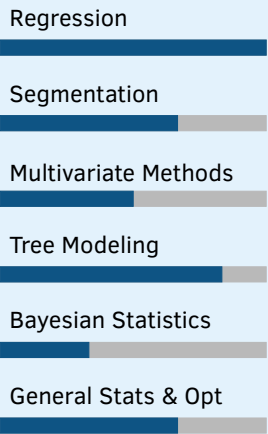


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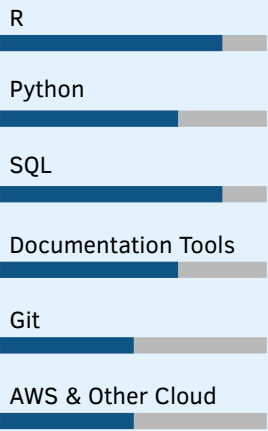
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Academic Research

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

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