Christian Tillich

Data Scientist

Stats

Regression

Segmentation

Multivariate Methods

Tree Modeling

Bayesian Statistics

General Stats & Opt

Code

R

Python

SQL

Documentation Tools

Git

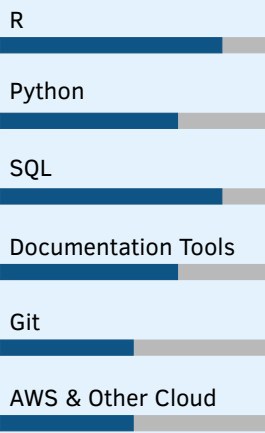**AWS & Other Cloud**

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.

About Me

Hello, I'm an analytically-minded Data Scientist with over a decade of experience in both model production, as well as deep-dive analysis making sense of model behavior. I prefer roles with a strong hands-on component, and prefer to lead through soft power and subject-matter-expertise as opposed to formal leadership roles. My latest passion has been experimenting with how LLMs can assist in fully-automated unsupervised learning

Work Experience

Numerator   Data Science: Panel Science   May 2020 - Present

- Designed AutoSeg, an Instant marketing segmentation modeling with LLM-in-loop processes for naming and descriptions. Reduces segmentation turnaround from weeks to days, and is valued at ~$2.5 million / year in the first year.
- Prototyped RNN-based tool to extract packaging type from images of CPGs. Quoted precision at 70% with 60-70% recall.
- Designed Brand Strength Model - an SEM relating survey attitudes to actual market behaviors for individual panelists. Fully automated process valued at $50k per engagement.
- 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/preprocessing toolsets for the team.
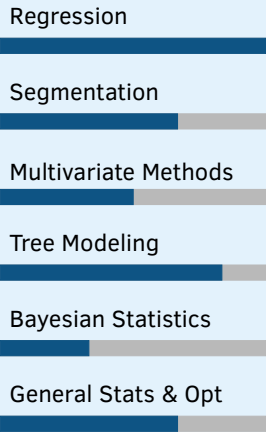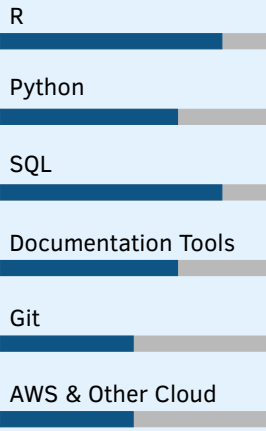- Trained and informally managed new team members

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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.
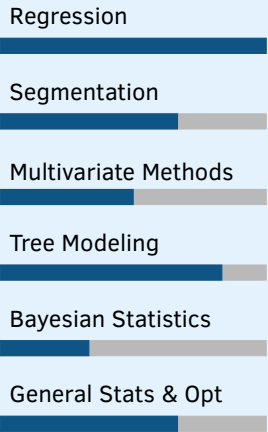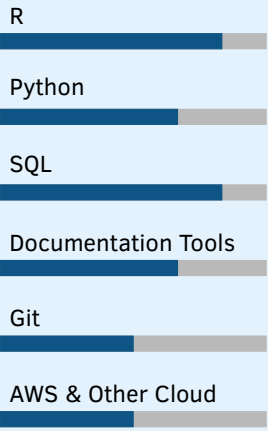
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Academic Research

| Research Assistant | Granato Research Team | Sep 2006 - Sep 2007 |

- Prepared samples for experiments.
- Prepared preliminary findings for NSF grant proposals.

| Research Assistant | CERI Research Team | May 2006 - Aug 2006 |

- 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

University	Degree	GPA	Years
DePaul University University of Illinois - UC	MS Statistics BS Physics	3.9/4.0 3.6/4.0	2012 - 2015 2004 - 2008