Untitled

Christian Tillich

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Skills

Modeling/Math	Programming/Tools
Strong: Linear/Logistic Regression, GLMNet, Decision Trees, Random Forest, Gradient-Boosted Models, Clustering	Strong: R, Markdown, Git, SQL (PostGres + Hive), Excel (+VBA)
Some Exposure: Time Series, Neural Nets, Markov Models, Nonlinear Optimmization, Multivariate Statistics, Path Analysis, Other Data Mining	Some Exposure: Bash Scripting, Python, Matlab, Mathematica, SAS, LaTeX

Work Experience

Avant Credit   **Data Science**   **Jun 2016 - Present**

- Constructed key underwriting models for the portfolio.
- Monitored models performance for degradation, suggested remedies and rebuilds.
- Developed a marketing segmentation model using unsupervised learning methods.
- 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.

Avant Credit   **Business Analytics**   **Sep 2015 - Jun 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/development errors and report back to stakeholders.

Education

DePaul University   **MS Statistics**   **2012 - 2015**

GPA: 3.9

University of Illinois - UC   **BA Physics**   **2004 - 2008**

Minor in Philosophy GPA: 3.6

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.