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EDUCATION

Harvard University: PhD, **Economics**; BA *cum Laude in General Studies*, **Applied Sciences** and Engineering
Association for Investment Management and Research: CFA Candidacy Program
Rensselaer Polytechnic Institute: Computer Science Courses
Oracle: Database SQL Certified Associate
Stanford, **U of Toronto**, **Johns Hopkins, IMF, UC Santa Cruz, U of Michigan, U of Washington:**
MOOC certificates in Data Science and Machine Learning Topics (see http://andy.harless.us/mooclist.html)
Springboard: Data Science Career Track curriculum

EXPERIENCE (*see related projects below*)

2018-	***Student***	studied wrangling, storytelling, machine learning	**Springboard**
2015-2018	***Economist***	generated quantitative interest rate forecasts	**LAB Econometrics**
2003-2015	***Economist***	produced analyses to support fixed income mgmt	**Atlantic Asset Management**
1997-2003	***Software Developer***	wrote statistical software and user documentation	**Intex Solutions**
1994-1997	***Statistical Programmer***	analyzed large personnel data files for litigation	**JLM, Inc.**
1989-1994	***Student***	studied macroeconomics and labor economics	**Harvard University**
1985-1989	***Programmer/Analyst***	wrote image analysis and treatment planning code	**Joint Ctr. for Radiation Therapy**
1983-1985	***Programmer/Trader***	analyzed financial data and traded futures	**Cambridge Data Analysis Corp.**

SKILLS

General

predictive modeling, machine learning, data analysis. statistical analysis, quantitative research, writing, macroeconomics, labor economics, capital markets, investment analysis, software development

Computer Languages

experienced: C, Fortran, SAS, Python (incl. Pandas, Scikit-Learn, Keras, various GB packages), EViews
working knowledge: R, JavaScript, HTML, SQL, TROLL, various statistical packages
basic knowledge: Octave/Matlab, Pig Latin, Java, Scala, C++

PROJECTS

Developed NLP online learning **model** to guess user gender from text of one tweet (*Springboard*, test set ROCAUC=0.68)
Developed CNN **model** to ascertain song tempos from audio files (*Springboard*, binary accuracy=0.91)
Developed GBDT **model** to predict equity returns (*IITAGNE* Data Science Challenge 2019, solo entry tied for 1st place)
Developed CNN **models** to find pneumonia in X-rays (*Kaggle* RSNA competition, led team of 3 placing 41/1499, sliver medal)
Developed **models** to predict default risk (*Kaggle* Home Credit competition, led team of 8 placing 108/7190, silver medal)
Developed **models** to find fraudulent clicks (*Kaggle* TalkingData competition, led team of 4 placing 30/3946, silver medal)
Developed **models** to predict restaurant visits (for *Kaggle* Recruit competition, led team of 3 placing 42/2157, silver medal)
Developed **models** to predict grocery sales (*Kaggle* Corporación Favorita competition, team of 6 placed 64/1674, silver medal)
Developed **models** to predict insurance claims (*Kaggle* Porto Seguro competition, led team of 4 placing 21/5163, silver medal)
Developed **models** to predict US house prices (*Kaggle* Zillow competition, team of 2 missed sliver medal due to coding error)
Developed aggregation **model** to predict web traffic (*Kaggle* Wikipedia competition, team of 6 placed 19/1095, silver medal)
Developed **models** to predict consumer purchases (*Kaggle* Instacart competition, solo entry placed 259/2622, bronze medal)
Developed CNN **model** to label terrain (*Kaggle* Planet competition, solo entry placed 120/938, all in final week)
Developed **models** to predict Moscow house prices (*Kaggle* Sberbank competition, led team of 3 placing 56/3274, silver medal)
Developed **models** to predict Iowa house prices (*Kaggle* "getting started" competition, solo entry, best rolling rank 5/1859)
Write **twitter** feed @AndyHarless misc. topics (*Business Insider* 101 Finance People You Have To Follow On Twitter Apr 2012)
Wrote **blog** posts on macroeconomic topics, "*Employment, Interest, and Money*" at blog.andyharless.com
Wrote quarterly economic **outlook** and scenario **analyses** (*Atlantic Asset Management*)
Managed quantitative futures **fund**, *Atlantic Macro Economics Fund (LAB Econometrics & Atlantic Asset Management*)
Developed *LAB* ARMAX **model** to forecast UST yields (*LAB Econometrics* & *Atlantic Asset Management*, 20yr realtime record)
Wrote estimation **modules** and **User's Guide** for Portable TROLL econometric modeling software (*Intex Solutions*)
Performed statistical **analyses** of company personnel data to find determinants of salaries and promotion (*JLM, Inc.*)
Wrote full-length non-fiction **book** *The Indebted Society* (w. James Medoff) on increasing role of debt in the US (*Little*, *Brown*)
Wrote doctoral **thesis** "Job Vacancies and Help Wanted Advertising as Macroeconomic Indicators" (*Harvard University*)
Developed machine vision **methods** to extract anatomical features from CT images (*Joint Center for Radiation Therapy*)
Developed automated trading **systems** for stock index, metal, bond, and forex futures (*Cambridge Data Analysis Corp.*)