

CONTACT INFORMATION	<p>E-mail: hbd119942@gmail.com Mobile: +86 16605610689</p> <p>Web: linchrisdeng.github.io Linkedin: www.linkedin.com/in/linchrisdeng</p>
RESEARCH INTERESTS	Bayesian Econometrics, Applied Machine Learning, Pricing Strategy, Operation Research, Data Science
EDUCATION	<p>University of Minnesota, Twin Cities Minneapolis, MN USA M.S., Industrial and Systems Engineering (Analytics) Sep 2017 - Jun 2019 GPA: 3.31/4 Advisor: Prof. William Cooper</p> <p>Nankai University, Binhai College Tianjin China B.M. — Industrial Engineering Sep 2007 - Jun 2012 GPA: 87.19/100, Rank: 1/65 Thesis: <i>Research on Chinese Enterprise Supplier Selection and Evaluation Mechanism in the Big Data Era</i></p>
COURSES TAKEN	Optimization, Stochastic Process, Machine Learning, Decision Analysis, Data-Driven Decision Analytics, R Programming, Applied Regression Analysis, Operation Research, Principles of Economics, Probability and Statistics, Statistics, Database and SQL Programming, Accounting and Financial Management
RESEARCH PROPOSAL	<i>Gaussian Process for Online Real-Time Pricing</i>
RESEARCH EXPERIENCE	<p>Price Competition and Seats Allocation within International Airline Alliance China Eastern Airlines – Commercial Committee Jan 2020 - present</p> <ul style="list-style-type: none"> Designed to model the relationship between sales price and seat allocation in subgroups within the alliance (e.g., codeshare flights) to increase expected profits. Estimated seat load factor measurement error by days before departure base on past 5-year flight data and stochastic demand simulation. <p>An Empirical Study of Bid Prediction and Pricing Strategy in North American HVAC Market (sponsored by Daikin Applied Americas) Sep 2018 - Dec 2018</p> <ul style="list-style-type: none"> Designed a pricing strategy based on historical bid data and the bidding process. Predicting the bid outcome in North American HVAC market by using an ensemble Machine Learning method which was inspired by Facebook Ads Clicking Prediction Method. Achieved prediction accuracy: 81%, recall (true positive rate): 82% Set up a Back-tested the pricing strategy base on Daikin bid data for both strategy design and bid price adjustment. Provided an efficient solution to clean and process bidding & component data and deploy it to models. Obtained a strategy of average profit of about 9% annual return over past 10+ years' bid log <p>Modeling Survivability of Breast Cancer Jan 2018 – Mar 2018 (sponsored by University of Minnesota Public Health Dept)</p> <ul style="list-style-type: none"> A comprehensive breast cancer cell survivability models enable identifying and targeting women at high-risk, while reducing too-early interventions in those at low-risk Applied ML-based estimates models include clustering, boosting, tree-methods to find out relevant variables that can improve discriminatory accuracy Results are used to recommend screening guidelines for potential patients and the design of future treatment assessment models <p>Handling Imbalanced Data – American Census Income Data Apr 2018 – May 2018</p>

- Collected statistics on the income – American Census data. Used the SMOTEBoost and RUSBoost to classify the imbalanced income data
- Use the N  iveBayes classifier to build the model and use cross-validation to select the number of features to include. And use Bayesian networks to find the internal relationships between features and labels

WORK EXPERIENCE

China Eastern Airlines – Commercial Committee

Strategic Pricing Consultant

Shanghai China

Dec 2019 – present

- Query and analyze passenger ticketing data to gain market knowledge, and leverage that knowledge to inform future pricing decisions
- Create deal negotiation models and parameters for China – Australia Airline Sales that maximize Revenue and support commercial objectives
- Future work will involve Game Theory model for Airlines Pricing

Guoyuan Agricultural Insurance CO., LTD,

Data Scientist Intern

Hefei, Anhui China

Jun 2018 – Aug 2018

- Provided an efficient solution to import and clean insurance data and deploy it to SQL databases to improve efficiency in update
- Maintained a website to put project’s related information online to reduce document cluster and accelerate data preparation pipeline
- Developed an advanced R function library to perform efficient data analyses including co-variates selection, automated report generation for over 3 projects

HONORS AND AWARDS

the First Prize Scholarship

2014

the Second Prize Scholarship

2015, 2016

NKBH Merit Student Award

2015

Outstanding Graduate

2017

SKILLS

Programming: Python, R, SQL, Matlab, C\C++

Software and Tool: Scikit, PyTorch, PySpark, RShiny, Rmarkdown, Tableau, AMPL

Certificate: Six Sigma Green Belt (IISE – Institute of Industrial & Systems Engineers)

Languages: English(professional), Chinese(native)

Standard Test: GRE: 150V, 170Q 2AW (Sep 04, 2016)