JIAXU FAN

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EDUCATION

Northwestern University, Evanston, IL — Anticipated June 2017
Master of Science, Chemical Engineering – Cumulative GPA: 3.71/4.00

Tianjin University and Nankai University – Joint Degree Program, Tianjin, China — July 2015
Bachelor of Science& Bachelor of Engineering, Molecular Science and Engineering

Relevant Courses: Machine Learning, Process Optimization, Applied math: Differential Equations, Life Cycle Analysis
Online Courses: Statistics with R, Managing Big Data with MySQL, Business Metrics for Data-Driven Companies, Problem Solving with Excel by PwC, Tableau 10 A-Z

SKILLS

Proficiency in Python, Tableau, Advanced Excel (pivot table, vLookups, etc), Powerpoint, Matlab, GAMS
Familiar with R, C/C++, Adobe Photoshop, Adobe Illustrator
Native Mandarin Speakers

PROJECT EXPERIENCE

Northwestern University Machine Learning Project, Evanston, IL — April 2017 – Presnet
- Implemented a k-nearest neighbors algorithm and a gradient descent algorithm with single hidden layer neural network feature basis in Python to solve a classification problem and compared the result

Northwestern University Life Cycle Analysis Project, Evanston, IL — April 2017 – Presnet
- Established a cradle-to-gate life cycle inventory(LCI) for the manufacturing of metal components in coffeemakers
- Created a dashboard in Tableau using the environmental impact data from TRACI

Northwestern University FDA Regulatory Science Project, Evanston, IL — April 2017 – Presnet
- Designed Phase 1, 2, and 3 clinical trial experiments based on pre-clinical studies information of selected new drug
- Filed a dossier including safety and toxicology data, abbreviated CMC documentation and PK/PD model

Northwestern University Process Optimization Project, Evanston, IL — May 2016 – June 2016
- Optimized wheat harvesting in China by Branch and Bound algorithm and Linear Programming Relaxation in GAMS

RESEARCH EXPERIENCE

Notestein Research Group, Northwestern University
Graduate Student Researcher, Urban Biorefinery — December 2015 – February 2017
- Engineered the <10% selective titania-based catalyst by ALD method to give ~80% selectivity
- Fixed the bottleneck quantification problem in the project for the 12 person team
- Grafted a 15-minute physical quantification method onto a 3-hour experiment with the conventional chemical method. This new procedure was later adopted by two groups at Northwestern University
- Discovered reaction mechanism by feature transformation with fixed polynomial basis in Matlab

Feng Research Group, Tianjin University, China
Research Assistant, Blood Vessel Engineering — February 2014 - June 2015
- Constructed the biomimetic blood vessel matrix using natural polymers found in silk(3 related publications)
- Fixed the core experiment apparatus during research

EXTRACURRICULAR ACTIVITIES

Logic-based Board Game Club, Evanston, IL
Co-founder — January 2016 - Present
- Organized weekly games and a quarterly championship

Northwestern Toastmasters Club, Evanston, IL
Member — September 2016 – January 2017

Volunteer High School Consulting, Tianjin, China
Starter and Volunteer — April 2014 – May 2014
- Recruited 30+ college students from different majors to join the volunteer consultant team
- Helped 300+ senior high school students decide their major by sharing firsthand college experience

INTERESTS

Chinese Chess, Travelling, Soccer, Werewolf (a logic and communication based board game)