

Zehao Qian

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Education

Durham University

Master of Science in Data Science (Social Analytics)

September 2023 – July 2024 (Expected)

Durham, England, British

Zhengzhou University

B.Eng in Industrial Engineering

September 2019 – July 2023

Zhengzhou, China

- GPA 82.75/100, Rank 23/102, Scholarship in 2019, 2021, 2022
- A+ Courses: Electrotechnics, Contemporary Manufacturing System, Mechanical Manufacturing Engineering, IE software and Application, Enterprise Process Reformation, Engineering Optimization and 16 other programs

Honors and Awards

Computer Algorithms

- ACM/ICPC - Second Prize of Lanqiao Cup Python Algorithm Competition at Provincial Level

Mathematical Modeling

- The Meritorious Winner Prize of 2023 MCM/ICM - Using Lasso Regression and XGBoost to analyse the relationship between boat size, price and region.
- The Second Prize of 2022 12th Mathor Cup College Students Mathematical Contest in Modeling - Solving 5G Base Station Signal Coverage Problems based on Harmony Search Algorithm

Innovation and Business Plan Competition

- First Prize at Provincial Level in Challenge Cup Business Plan Competition (2022) and First Prize at Provincial Level in Challenge Cup First Prize at Provincial Level in Challenge Cup (2023)
- First Prize at Provincial Level in E-Commerce Competition Innovation, Creativity and Entrepreneurship (2022)


Research Experience

Computer and Industrial Engineering Group

September 2021 – Present

Group Member for **DevOps**, School of Management, Zhengzhou University

 [CIEG Homepage](#)

- **Solutions for Tobacco Production (China Tobacco Company Cooperation Project)**
 - This project will continue from May 2023 to 2024.
 - Identification of tobacco pests and diseases and drug dispensing scheme based on Natural language processing and Knowledge graph technology.
 - Using deep reinforcement learning (pointer network) to optimize cigarette production parameters and improve yield.
- **Teaching Assistant for Engineering Optimization** 
 - In the spring semester of 2023, I made slide and courseware for engineering optimization course, mainly introducing Convex optimization and nonlinear optimization as well as root solution algorithm.
- **A game theory paper – Web 3D Technologies and Game Theory**
 - Constructed supermarket 3D models and customer positioning, used the mapping package called Felt and the Web 3D library Three.js.
 - Optimized of supermarket collocation based on combinatorial game theory, the paper will be published in journals in Mar.2024.
- **Reinforcement Learning based Q-learning Yard Crane Scheduling Optimization**
 - Research on replicating Q-learning algorithm and optimizing container scheduling for yard cranes.
 - Some mathematical models of the project will be solved using the GJO algorithm, and the relevant research results will be published on IEEE Transaction in Nov 2023.

Open-Source Contributions

FreeLeek

Oct 2021 – Present

Project Author and Maintainer

 [FreeLeek](#)  [FreeLeek-ESP32](#)

- FreeLeek is an open source server-end framework for transmitting financial data to app backend and WeChat platform by using Python Flask, Tushare Pro and Akshare.
- FreeLeek can automatically push finance news to WeChat official account subscribed by user.
- More users' function can be defined easily by editing python script such as quant trade algorithms, stock position management system.

Nashsweeper

Dec 2022 – May 2023

Project Author (Excellent Graduation Thesis)

[🔗 Nashsweeper Repo](#)

- Nashsweeper shows a playful introduction of Nash equilibrium and designs a game named Nashsweeper, which is a game designed to find the pure strategy. [🌐 iPad Version](#) [🌐 PC Version](#)
- Nashsweeper core computing engine adopts the regret-value algorithm implemented with SQLite. As a Python package, it can be invoked in jupyter- notebook to deal with industrial and data science problems.

OpenIE – Open Source Industrial Engineering Foundation

April 2022 – Present

Foundation Initiator, Project Leader

[🌐 OpenIE foundation](#)

- Prediction of Tool Wear in Machining Centers Based on Deep Learning and Its Industrial Application (Feature engineering and Recurrent neural network are used in this project). [🌐 OpenIE Repo](#)
- Some other optimizations for industrial scenario problems.

Internship Experience

Tianjin Jinmao Int'l Freight Co., Ltd

Jan 2022 – Feb.2022, Jun 2022 – Sep.2022

Server-side Development and Operation and Maintenance Engineer Assistant

Tianjin, China

- Engaged in server operation and maintenance, back-end development, and database management.
- Developed company's enterprise resource planning system (ERP) and customer management system (CMS) utilizing JavaScript and MySQL, contributing to the company's enterprise digitalization.

Skills

English Evidence: IELTS 6.5 with every element above 6.0 (23/06/2023)

Full Stack Programming: Python (Flask framework for Backend Dev and a little PyTorch), Node.js (Vue framework for Frontend Dev) and MatLab (for Machine Learning and Signal Processing)

Computer Skills: Docker Deployment, Unity, Simulation Software, Statistic and Optimization, FlexSim(for logistics), LaTeX (I used it to edit this CV) and SPSS.

Hands-on ability and musical talent: Mechanical modeling, 3D printing and Hardware making. Proficient in guitar, bass, piano, and other musical instruments.



Zhengzhou University Student Transcript

Student No:201907070222

College:School of Management

Study Duration:4Years

Name:Qian Zehao

Major:Industrial Engineering

Class:2019070101

Course Name					Course Type	Credit	Grade	GP	Course Name					Course Type	Credit	Grade	GP			
1. 2019-2020 School Year First Semester Semester GPA: 2.61									Module Design for Facility Planning and Material Flow Analysis								Obligatory	1	C	2.7
College English Listening & Speaking (I)					Obligatory	1	79	2.7	Metalworking Practice								Obligatory	2	81	3.2
Linear Algebra					Obligatory	3	80	3.2	6. 2021-2022 School Year Second Semester Semester GPA: 3.47											
Military Theory					Obligatory	1	78	2.7	Modeling and Simulation of Production System								Obligatory	2	86	3.7
Introduction to Computer					Obligatory	2	83	3.2	Contemporary Manufacturing System								Obligatory	3	98	4
Physical Education (I)					Obligatory	1	88	3.7	Enterprise Processs Reformation								Elective	2	92	
Morality & Fundamentals of Law					Obligatory	3	77	2.7	Production planning and control								Obligatory	2	69	1.7
College English Reading and Writing (I)					Obligatory	2	79	2.7	Operation Management								Obligatory	3	86.2	3.7
Economic Law					Obligatory	2	85	3.7	Industrial Engineering Software and Application								Elective	2	90	
Calculus A (I)					Obligatory	5	60	1.2	Product Innovation Engineering								Obligatory	1	84	3.2
Management					Obligatory	3	78	2.7	Design for Human Factors Engineering								Obligatory	1	80	3.2
2. 2019-2020 School Year Second Semester Semester GPA: 3.09									Policy & Political Situation Analysis								Obligatory	2	88	3.7
Etiquette for College Students					Obligatory	1	90	4	Specialty English								Elective	2	80	
An Introduction to Cloud Computing and Simulation for Science & Engineering					Elective	2	90		Reliability Engineering								Elective	2	83	
3D Printing Technology and Application (MOOC)					Elective	2	97		Mechanical Manufacturing Engineering								Obligatory	3	91	4
Physical Education (II)					Obligatory	1	91	4	(Product Development & Technology Management)								Obligatory	2	82	3.2
College English Listening & Speaking (II)					Obligatory	1	86	3.7	7. 2022-2023 School Year First Semester Semester GPA: 3.94											
High-level Programming Language					Obligatory	3	84	3.2	Innovation practice								Obligatory	2	A	4
College English Reading and Writing (II)					Obligatory	2	71	2.2	Comprehensive practice of industrial engineering								Obligatory	3	92	4
Introduction to Logic					Elective	1	99		Organizational Behavior								Elective	2	78	
Calculus A (II)					Obligatory	5	90	4	Industrial Design Fundamentals								Elective	2	93	
Probability Theory and Mathematical Statistics					Obligatory	3	62	1.2	The foundation of innovation and entrepreneurship(Management Science and Engineering)								Obligatory	2	92	4
Basic Accounting					Obligatory	2	82	3.2	Productive Practice								Obligatory	2	A	4
Science and Technique of Bionics					Elective	2	90		Frontiers of Earth Science								Elective	2	A	
3. 2020-2021 School Year First Semester Semester GPA: 2.34									Career Planning and Career Guidance for College Students								Obligatory	2	86	3.7
Outline of Chinese Modern History					Obligatory	3	84	3.2	8. 2022-2023 School Year Second Semester Semester GPA: 4											
College English (III)					Obligatory	2	73	2.2	Engineering Optimization								Elective	3	96	
Crime: Causes and Countermeasures (MOOCS)					Elective	2	90		Graduation Thesis								Obligatory	16	A	4
Economics					Obligatory	3	60	1.2												
Introduction to Maoism and Chinese Characteristic Socialism Theory System(I)					Obligatory	2.5	87	3.7												
Operations Research					Obligatory	3	66	1.7												
Applied Statistics					Obligatory	2	71	2.2												
Physical Education (III)					Obligatory	1	84	3.2												
Introduction to Systems Engineering					Obligatory	2	60	1.2												
Financial Management					Obligatory	2	72	2.2												
Database System and Application					Obligatory	2	80	3.2												
4. 2020-2021 School Year Second Semester Semester GPA: 2.88																				
Computer Aided Design					Obligatory	2	78	2.7												
Human Factor Engineering					Obligatory	2	75	2.7												
Physical Education (IV)					Obligatory	1	87	3.7												
Cognitive Practice					Obligatory	2	B	3.7												
Introduction to Maoism and Chinese Characteristic Socialism Theory System(II)					Obligatory	2.5	87	3.7												
Engineering Mechanics					Obligatory	3	79	2.7												
Introduction to Industrial Engineering					Obligatory	2	73	2.2												
Metal Technology					Elective	2	90													
College English (IV)					Obligatory	2	79	2.7												
Basic Principles of Marxism					Obligatory	3	88	3.7												
Engineering Drawing (I)					Obligatory	3	80	3.2												
College Physics A (I)					Obligatory	4	68	1.7												
5. 2021-2022 School Year First Semester Semester GPA: 3.28																				
Design for ERP					Obligatory	1	B	3.7												
Quality Management(English Edition)					Obligatory	3	76.9	2.7												
Facilities Planning and Logistics System Design					Obligatory	2	80	3.2												
An outline of Xi Jinping's thought of socialism with Chinese characteristics in the new era					Obligatory	2	76	2.7												
Social practice					Obligatory	2	95	4												
College Physical Experiment A (I)					Obligatory	1.5	84.162	3.2												
Strategic Management					Elective	2	70													
Electrotechnics					Obligatory	3	90	4												
Total Credits	183.5	Obligatory Courses Credits	108.5	Limited Courses Credits	45	Optional Courses Credits	30	Total GP	476.1	GPA	3.1	Average Grade	82.75							

☐ The Calculation of GPA doesn't include the elective course and the elective course doesn't calculate GP.

Scan code validation



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