

# YUCHEN DUAN

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## PROFILE

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- IT programming professional with years of training and industry experience
- Tech Expertise: **web**-based application development, data **modeling**, **AI** and machine learning, **cloud**-based API, **automation**, **image** processing and **gaming** programming
- Strong records: Securities Trading Classification; Data Encoding/Decoding & Anomaly Detection
- Team Player, fast learner, enjoy coding

## WORK EXPERIENCE

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### Fintech

May-Aug. 2019

China Southern Asset Management Co., Ltd.,

Shenzhen, China

- Fixed 7 major systematic bugs within the **VUE** framework to enhance the operation platform, implemented responsive web design and improved loading time by 100%
- Implemented 5 **AI** strategies to perform comprehensive market analysis, including synergy, abnormality recognition, characteristic matrix, and slide time window, forecasting (**Python, Oracle, Java**)

### Proprietary Trading, Commodities

May-Aug. 2018

Tianfeng Securities Co., LTD.,

Beijing, China

- Developed and implemented **CTP** trading system to deliver quantitative strategies, achieving **high-frequency** trading with limited computational power (**C++, MySQL**)

### Programmer & Application Development

May-Aug. 2016

Center for IT and Operation Support, China Telecom.,

Shenzhen, China

- Enhanced internal search efficiency and directory inquiry efficiency by updating and refining the CRM system, with an 100% satisfactory rate in post-usage surveys and assessments (**HTML, Oracle, Cloud**)
- Created, managed, and maintained reimbursement system for 500+ employees with 98% satisfactory rate(**Java, MySQL**)

## PROJECTS

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### Artificial Intelligence (AI) Projects

#### Principal Developer, Image Processing

Coursework, Penn State; Fall,2017

- Developed image processing software for texture synthesis, grid removal, image recognition
- Developed and tested image recognition software (**C++, CNN**)

#### Co-developer, Anomaly Detection

Coursework, Penn State; Spring,2017

- Created a Lockheed Martin flight simulator to automatically identify operational errors and abnormalities (**Python**)

#### Principal Developer, PC game

Research Design; Summer,2016

- Created and tested interactive **Windows APP** MahJong, achieving an 80% average AI winning rate
- Established AI-based multi-player aircraft software (**C#**)

### Financial Analytic Projects

#### Co-developer, SPY Forecast

Research, UIUC; Fall,2019

- Using SMA NLP **Sentiment** Data predict SPY daily close. Achieved 40% annual return when the market benchmark only returns 13%, using **python**. This project won the second place in our program. (**Python**)

#### Co-developer, Gaussian process

Research, UIUC; Summer,2019

- Built option pricing model through Normal Inverses Gaussian process, inverse transform method, and Monte Carlo simulation; Project presented at the 2019 **R/Finance** Conference (**R**)

### Websites Projects

#### Principal Developer, Finance data website, Data once again

Coursework, UIUC; Spring,2019

- Developed, maintained, and optimized a trading data website (dataonceagain.com) (**PHP, MySQL,Cloud**)
- Created platform for paper trading (**PHP, MySQL,Cloud**)

## SKILLS & RELATED COURSEWORK

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**Tools/Environments:** AWS, Google Cloud Platform, Git, MongoDB, MySQL, Linux

**Program Language:** Python, Java, JavaScript, HTML, PHP, CSS, SQL, VBA, R, C++, C#, C, Excel, Windows Forms

**Framework:** jQuery, Bootstrap, Node.js, VUE

**Related Coursework:** Stochastics, Numerical Methods, Cloud, Deep Learning, Web Development, AI, Database

## EDUCATION

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### UNIVERSITY OF ILLINOIS

Urbana-Champaign, IL

*Master of Science in Financial Engineering*

December 2019

- Overall GPA: 3.5/4.0

### PENNSYLVANIA STATE UNIVERSITY

State Collage, PA

*Bachelor of Science in Computer Science*

December 2017

- Overall GPA: 3.6/4.0; Dean's List, 5 out of 7 semesters; Penn State Honors Student