# Yang Bai

*Finance Ph.D. Candidate*

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Yang's Dark Theme CV
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## Education

- **University of Missouri**
  *Ph.D. in Finance (Chair: Kuntara Pukthuanthong)* *May 2022 (Expected)*
  - Outstanding Graduate Teaching Assistant Award (2020-2021)
  - Raymond and Susan Chen Trulaske College of Business International Ph.D. Scholarship (2020-2021)
  - Outstanding Graduate Research Assistant Award (2019-2020)
  - Trulaske College of Business Ph.D. Scholarship (2018-Current)
  - Trulaske College of Business Strategic Priority Scholarship (2018-Current)
- **University of Alabama**
  *Ph.D. in Finance* *2017-2018 (Transferred)*
- **University of Georgia**
  *M.Sc. in Statistics & B.Sc. in Mathematics* *May 2015*
  - Regent Out-of-state Tuition Waiver (2014,2015)

## Working Papers

1. Machine Learning Classification and Portfolio Allocation: An Examination of Market Efficiency, Bai and Pukthuanthong (2020)

**Presentations**: *AFA Ph.D. Poster Session (2021), University of Missouri (2020), Crowell Prize 2020 Seminar (2021), University of Miami Winter Conference on Machine Learning and Business (2021), World Finance Conference (Scheduled), SFA (Scheduled)*

**Awards**: *Crowell Prize 2020 (Third Prize), PanAgora Asset Management*

**Abstract**: We frame the asset pricing problem as a machine learning classification problem. The predictions on 3.34 million observations yield significant out-of-sample economic gains. Through directly measured accuracies, binomial tests suggest that the classifiers can extract forward-looking contents from historical information, implying imperfect information efficiency. The classifiers exploit the differences in return state transition uncertainties. As reflected by a pre-realization measure based on multi-class predicted probabilities, the classifiers are more confirmative in predicting high-trading-friction stocks. Consistently, only trading frictions contribute to out-of-sample predictability throughout 26,302 distinct stocks' lifetimes. The adjustment of the classifiers' favorance over certain return states increases the performance.

## Academic Experience

- **Graduate Research Assistant**
  *Jing Wang, University of Missouri* *Spring 2022, Fall 2021*
- **Graduate Research Assistant**
  *Kuntara Pukthuanthong and Jing Wang, University of Missouri* *Summer 2021*
- **Course Instructor**
  *Real Estate Appraisal*[1]*, University of Missouri* *Spring 2021 (4.0/5), Fall 2020 (4.4/5)*
- **Graduate Research Assistant**
  *John Howe and Kuntara Pukthuanthong, University of Missouri* *Summer 2020*
- **Graduate Research Assistant**
  *Frederick Bereskin, John Howe and Jialu Shen, University of Missouri* *Spring 2020, Fall 2019*
- **Discussion Class Instructor**
  *Survey of Business Finance, 3 Sections/Semester, University of Missouri* *Spring 2019, Fall 2018*

[1]The course was delivered through online synchronous lectures due to the COVID19 pandemic for both semesters. The teaching evaluation score from students who received A or B in spring 2021 (fall 2020) is 4.3/5 (4.4/5). Around 85% (90%) students received A or B in the spring 2021 (fall 2020) section.

- **Graduate Teaching Assistant**
  *Intermediate Financial Management, University of Alabama* *Spring 2018, Fall 2017*

## Conference Discussion

- **University of Miami Winter Conference on Machine Learning and Business** 2021
  *Murray, Xiao and Xia 2020: Charting by Machines*

- **World Finance Conference** 2021
  *Biswas, Li and Piccotti 2021: Evaluation of Two Models of Exchange Rate Determination Using a Machine Learning Technique*

## Invited Workshop

- **Society of Financial Econometrics & New York University (Shanghai)**
  *SoFiE Summer School: Machine Learning in Finance with Jianqing Fan and Dacheng Xiu* *Summer 2021*

- **Machine Learning Summer Schools & National Taiwan University (Taipei)**
  *Machine Learning Summer Schools: MLSS 2021 Taipei* *Summer 2021*

## Other Professional Activities

- **Machine Learning Reading Group**
  *Organizer*

## Industry Experience

- **Data Scientist**
  *Assurant* *2015-2017*

- **Assistant Client Manager Intern**
  *Industrial and Commercial Bank of China* *Summer 2013*

- **Business Development Intern**
  *Bank of East Asia (Hong Kong)* *Summer 2010*

## Professional Membership

American Finance Association, European Finance Association

## Professional Designation

- **Global Association of Risk Professionals**
  *Certified Financial Risk Manager (FRM®)*

## Other Publications

1. Bai, Dang, Park and Lee, 2018, A rolling analysis on the prediction of value at risk with multivariate GARCH and Copula, *Communications for Statistical Applications and Methods* 25:605-618[2].

[2]This is an applied statistics paper based on Yang's master's degree thesis.