

## Amin Shirazi

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### CONTACT INFORMATION

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[ashirazist.github.io](https://github.com/ashirazist)

### EDUCATION

**Iowa State University (ISU)**, Ames, Iowa USA

Ph.D Students, Statistics, August 2017 - Present

Advisor: Peng Liu

**Shahid Beheshti University, Tehran, Iran**

*Department of Statistics, Faculty of Mathematical Science*

M.S., Statistics, February 2014

Research title: “Testing Statistical Hypothesis for Jump Models in Stochastic Differential Equations”

Advisors: Hamideh D. Hamedani, AriReza Taheriyoun

**Imam Khomeini International University of Qazvin, Qazvin, Iran**

*Department of Statistics, Faculty of Science*

B.S., Statistics, September 2010

Research title: “Simulation in Statistical Models”

Advisor: Afshin Fallah

### RESEARCH INTERESTS

- Statistical Analysis of ”-omics” Data
- Statistical Genomics
- Microbiome Data Analysis
- Statistical Analysis of pre-clinical studies
- Statistical Inference for High-dimensional Data
- Statistical Learning
- Computational Statistics
- Reproducible Research

### PROJECTS PUBLICATIONS

Amin Shirazi, Hamideh D. Hamedani, “Model Selection for Stock Market Using Statistical Hypothesis Testing”, The First FINACT conference of Mathematical Finance and Actuary”, Institute For Research in Fundamental Sciences (IPM), Oral presentation, (August 2014)

### ARTICLE IN PREPARATION

Amin Shirazi, Hamideh D. Hamedani, “Can Noise Pollution Be Modeled by Pure Jump Processes?”

Ali Sharifi, Hamideh D. Hamedani, Amin Shirazi, “Statistical Hypothesis for Continuous-Time Processes”.

## RESEARCH EXPERIENCE

### Shahid Beheshti University

*Research Assistant*

**March 2014- January 2017**

Research assistant in researches whose aims were model selection for stock market using statistical hypothesis testing, applying statistical hypothesis to continuous-time processes and modeling pure jump processes.

## HONORS AND AWARDS

*Shahid Beheshti University*

2014

Ranked 5<sup>th</sup> among all graduate students of mathematical statistics in MS program, Department of Statistics, Faculty of Mathematical Science

*Master's Entrance Exam, Iran*

2011

Ranked 17<sup>th</sup> in national master entrance exam among more than 8000 applicants

*Imam Khomeini International University of Qazvin, Qazvin, Iran*

2010

Ranked 5<sup>th</sup> in the whole four-year bachelor study among 41 students in undergraduate program, Department of Statistics, Faculty of Science

*Semi-finalist in the National Statistics Olympiads, Iran*

2009

## SOFTWARE DEVELOPMENT

*PetFindr*

PetFindr (R package) provides an R interface for the Petfinder.com API (V2). Once a user obtains an API key and secret from Petfinder, this package allows the user to retrieve information about animals by type, breed, location, and other useful characteristics. (<https://earl88.github.io/PetFindr/index.html>)

## TEACHING EXPERIENCE

### Iowa State University, Ames, Iowa USA

*Instructor*

Fall 2019

Course instructor for STAT 305 (Engineering Statistics) (<https://ashirazist.github.io/stat305.github.io/index.html>). Statistics for engineering problem solving, covering principles of engineering data collection, descriptive statistics, elementary probability distributions, principles of experimentation, confidence intervals and significance tests, one- and two-sample studies, regression analysis, and statistical software. Approximately 70 students.

*Co-Instructor*

Summer 2019

Course co-instructor for STAT 305, online section (Engineering Statistics). Statistics for engineering problem solving, covering principles of engineering data collection, descriptive statistics, elementary probability distributions, principles of experimentation, confidence intervals and significance tests, one- and two-sample studies, regression analysis, and statistical software. Approximately 100 students.

*Teaching Assistant*

Spring 2019

Teaching assistant for STAT 588 (Statistical Theory for Research). Responsible for teaching some parts of the course, helping construct tests, grading assignments, maintaining weekly office hours to communicate in person with students as needed. Approximately 30 students.

*Teaching Assistant*

Fall 2018

Teaching assistant for STAT 330 (Probability and Statistics for Computer Science). Responsible for helping construct tests, grading assignments, maintaining weekly office hours to communicate in

person with students as needed. Approximately 80 students.

*Teaching Assistant*

Spring 2017

Teaching assistant for STAT 305 (Engineering Statistics). Responsible for grading assignments, maintaining weekly office hours to communicate in person with students as needed. Approximately 90 students.

*Grading Assistant*

Fall 2017

Teaching assistant for STAT 305 (Engineering Statistics). Responsible for grading weekly quizzes and assignments. Approximately 70 students.

*Grading Assistant*

Fall 2017

Teaching assistant for STAT 226 (Introduction to Business Statistics). Responsible for grading assignments and exams with eight other graders to share the grading across all nine sections. Approximately 700 students in all sections.

**Shahid Beheshti University, Tehran, Iran**

*Grading Assistant*

Spring 2013

Mathematical analysis II. Responsible for grading assignments, scheduling review sessions for exams.

*Teaching Assistant*

Fall 2012

Stochastic processes. Responsible for teaching some parts of the course, designing and grading assignments.

**Imam Khomeini International University of Qazvin, Qazvin, Iran**

*Teaching Assistant*

Fall 2009

Mathematical Statistics II. Responsible for Giving and grading quizzes, grading homework, solving necessary or requested problems for students.

**Mahestan Educational Institute, Tehran, Iran**

*Instructor*

September 2011 - April 2012

Technical Instructor for national master entrance exam applicants. Responsible for statistical consultant and technical instructor, helping applicants with their questions and advising them to choose the most appropriate graduate program related to their interests.

WORK  
EXPERIENCE

**Koosha Setareh Iranian International Co, Tehran, Iran**

*Data Analyst, R & D Department*

July 2015- July 2017

Job descriptions: Using statistical techniques to interpret market data in close collaboration with sales department and marketing department, predicting demands for products and services, sales analysis and predicting future trends by using data mining methods, generating useful business reports, tables, charts, and graphs to the logistic department and management board. (<http://kooshasetarehpasargad.com/koosha/en/> )

**Iranian Shaygan Pars, Tehran, Iran**

*Data Analyst, R & D Department*

September 2014- June 2015

Job descriptions: interpreting sales data in close collaboration with sales department and making sure that the right managerial decisions are made based on the results, presenting results to senior

managers, regulatory authorities, predicting demands for products and services, collecting data to monitor levels of progress in sales and also customer satisfaction.

### **Info Tech International Company, Tehran, Iran**

*Data Analyst, R&D Department*

*R&D Consultant of PSP (Payment Service Provider) Department* May 2014- September 2014

Designing opinion polls to collect data, and then interpreting them, using R (the specialized statistical software) to identify trends and relationships within the data, conducting tests to find out the data's validity and to account for high survey nonresponse rates or sampling error, presenting written reports, tables, charts, and graphs to the logistic department and management board. (<http://infotech-co.com/>)

### **Mahestan Educational Institute, Tehran, Iran**

*Director Consultant and Technical Instructor*

September 2011- April 2012

*Educational board*

Job descriptions: teaching statistical subjects and necessary course books, designing quizzes to assess the effects of teaching methods and associated development in students' skills.

### **SERVICE AND LEADERSHIP**

#### **Iowa State University**

*Statistics in the Community (StatCom) Executive Committee*

2019

*STATCOM at Iowa State offers statistical advice and expertise free of charge to governmental and nonprofit groups in the local community.*

*Student representative to departmental faculty meetings*

2019

*STATers, social organization for graduate students, social committee*

2017 - present

*Iranian Students and Scholars' Association, treasurer*

2018

### **PROFESSIONAL AFFILIATIONS**

American Statistical Association (ASA), Institute of Mathematical Statistics (IMS)

Iranian Statistical Society(ISS)

### **COMPUTING**

- Mathematical and Statistical Computing: R, SAS; some experience with HTML; Currently learning SQL, Spark and Scala.
- Reporting:  $\text{\LaTeX}$ , Markdown, HTML, Shiny
- Content Management: Git