# AMIN SHIRAZI

Ames, Iowa

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## PROFESSIONAL SUMMARY

- Biostatistics graduate intern at ClinChoice, Biostatistics and Programming Division, Fall 2020
- Biostatistics graduate intern at Merck & Co, Design Methodology Division, Summer 2020
- 4+ years industry experience in data analysis in research and development department of 3 companies, 1+ years consultant experience in industry and academia
- Successfully collaborated with sales, marketing, customer service and logistic departments
- Advanced computer skills to write objective-oriented codes and develop packages in R
- R package development contribution: PetFindr, gsDesign2, gsdmvn, simtrial
- PhD student with bachelor and master background in statistics
- Treasurer and executive board member of the Statistics in Community organization (STATCOM)

## TECHNICAL AND ADVANCED COMPUTER SKILLS

- Numerical and Data Analysis: R, SAS, JMP
- Reporting: LaTeX, Markdown, Sweave (integration of R codes into LATEX), HTML, Shiny
- Content Management: Github, Bitbucket

## EDUCATION

**Doctor of Philosophy (PhD), Statistics**                    **Aug. 2017–May 2022**
Department of Statistics,
Iowa State University (ISU), Ames, IA

**Master of Science (MSc), Mathematical Statistics**          **Sep. 2011–Feb. 2014**
Department of Statistics, Faculty of Mathematical Science,
Shahid Beheshti University, Tehran, Iran

**Bachelor of Science (BSc), Statistics**                    **Sep. 2006–Sep. 2010**
Department of Statistics,
Faculty of Science, IKIU, Qazvin, Iran

## EXPERIENCE

**Biostatistics Research Assistant**                         **Aug. 2017-present**
Department of Statistics, Iowa State University, Ames, Iowa

1. Statistical Data Analysis of gene expressed data: Applying integrated data analysis on -Omics data using a range of network based and Bayesian based methods
2. Course instructor of record for Engineering Statistics with approximately 70 undergraduate students (Fall 2019-Spring 2020)
3. Course co-instructor for Statistical Theory for Research with 30 graduate students (Spring 2019)
4. Teaching assistant for Probability and Statistics for Computer Science, Introduction to Business Statistics and Engineering Statistics with 75 undergraduate students in average (Fall 2017–Fall 2018)

**Stock Market Research Assistant**                          **Mar. 2014–Jan. 2017**
Shahid Beheshti University, Tehran, Iran

1. Leader of a research group of 6 students to gather, clean and analyze stock market data
2. Model selection for stock market data using statistical hypothesis testing
3. Utilized statistical methods to 100+ stock market data sets using R to evaluate model robustness

## PACKAGE DEVELOPMENT

**gsDesign2**: The gsDesign2 package supports recent innovations group sequential clinical trial design including non-proportional hazards and graphical multiplicity control with group sequential design.

**gsdmvn**: The goal of gsdmvn is to enable fixed or group sequential design under non-proportional hazards. Piecewise constant enrollment, failure rates and dropout rates for a stratified population are available to enable highly flexible enrollment, time-to-event and time-to-dropout assumptions.

**simtrial**: This package provides some basic routines for simulating a clinical trial. The primary intent is to provide some tools to generate trial simulations for trials with time to event outcomes.

**PetFindr:** 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.

## JOB EXPERIENCE

**Biostatistics Graduate Intern, Biostatistics and Programming Division**                    **Sep. 2020–Present**
ClinChoice, PA, USA

1. Developing unit tests for Group Sequential Design packages
2. Simulation studies for oncology clinical trials

**Biostatistics Graduate Intern, Design Methodology Division**                    **June 2020–Sep. 2020**
Merck & Co, PA, USA

1. Collaboration in package development at Merck & Co. in 3 packages: simtrial, gsDesign2 and gsdmvn
2. Managing branches of the three packages under development
3. Simulation studies for group sequential designs under non-proportional hazard assumption
4. Research in design methodology for group sequential designs for time-to-event endpoint trials
5. Managing System Development Life Cycle for the package development team
6. Assessing R packages vs. SAS Macro testing strategy

**Data Analyst, R&D department**                    **July 2015–July 2017**
Koosha Setareh Iranian International Co, Tehran, Iran

1. Benefited statistical skills to interpret market data in corporation with sales and marketing department
2. Modelling generalized linear model to data from market research
3. Supervised and accurately predicted demands for products and services
4. Sales analysis and predicting future trends using data analytical methods
5. Generated creative business reports, tables, charts, and graphs for the logistic department

**Data Analyst, R&D department**                    **Sep. 2014–June 2015**
Iranian Shaygan Pars, Tehran, Iran

1. Interpreted sales data applying statistical models as a teamwork with sales department
2. Presented results to senior managers and regulatory authorities
3. Forecasted demands for products and services

**Statistical Consultant and Data Analyst**                    **May 2014–Sep. 2014**
Info Tech International Company, Tehran, Iran

1. Programmed software codes to identify trends and relationships within the data utilizing R
2. Conducted tests for survey data validation using statistical knowledge and analytical methods
3. Design of experiment methods in optimization
4. Call center consultant for designing, collecting and analysis of customer satisfaction survey

**Director Consultant and Technical Instructor**                    **Sep. 2011–Apr. 2012**
Mahestan Educational Institute, Tehran, Iran

1. Instructor of statistical core courses, approximately 100 undergraduate students
2. Student consultant

## SERVICE AND LEADERSHIP SKILLS

**Statistics in the Community, Treasurer and Executive Committee member**                    **Aug. 2019–present**
Department of Statistics, Iowa State University, Ames, Iowa
STATCOM at Iowa State offers statistical advice and expertise free of charge to governmental and nonprofit groups in the local community

**Statistics faculty committee - student representative**                    **Aug. 2019–present**
Department of Statistics, Iowa State University, Ames, Iowa

- Communicate relevant information from the student association to the faculty members
- Provide students' feedback of the departmental decisions

**Iranian Students and Scholars' Association, Treasurer, ISU**                    **Aug. 2018–Aug. 2019**

- Event planner for 5 big events for the members of the association and non-Iranian people
- Organized the new year celebration event and hosted approximately 300 people
- Communicated with finance committee and senate of Iowa State University for funds to hold events

## PROFESSIONAL AFFILIATIONS

- American Statistical Association (ASA), Institute of Mathematical Statistics (IMS)
- Iranian Statistical Society (ISS)