**Mo Zhai**

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A dedicated and results-oriented data specialist with years of industry experience working on data-driven modeling, data engineering, and data platform design and implementation.

Proven skills in leveraging data science knowledge and software development expertise to provide valuable solutions to business. Excellent ability to work as a tech lead to solve challenging business problems in fast-paced, dynamic, and cross-functional teams.

# Skills

**Field & Practices**: Machine Learning, Database Design and Programming, NLP, Distributed Computing, Statistical Analysis, Reinforcement Learning, Mobile Development, Web/Application Development

**Programming Language**: Python, R, SQL, Swift, C#, C++, Java, JavaScript, SAS, Objective C, CSS, Html…

**Frameworks**: Pandas, Numpy, Spark, Scikit-learn, Shiny, PyTorch, iOS, ASP.net, OpenGL, Android, Keras, React Native, Liferay, Tableau…

**Tools**: Linux, Jupyter, VS Code, XCode, R Studio, git, Azure, PyCharm, Eclipse, Jira, Unity3D…

# Education

**University of Chicago - Master of Science in Analytics** **03/2016** **- 12/2018**

Courses: Adv. Machine learning, Statistical Analysis, Time Series, Deep Learning, NLP, Bayesian Methods

**Honorable** Capstone Showcase for Graduation **(GPA: 3.9)**

**DePaul University - Master of Science in Computer Game Development 09/2009 - 03/2012**

Graduation with **distinction** **(GPA: 3.98)**

# Experience

**Sr Bus & Tech Sol Analyst@ William Blair & Company 6/2018 - now**

* Designed and implemented emerging market debt data services with a new investment team, in charge of implementing vendor data ETL, database design and programming, data API development, and corporation risk modeling in NoSQL
* Led the data validation projects and created the data validation framework with standardized data check scripts and Shiny dashboard to detect data issues and monitor data process.
* Implemented country ESG modeling with a data refresh pipeline
* R packages development.
  + Contemporized IM Portfolio attribution R package to speed it up at least ten times to help the backend office generate daily reports in time.
  + Implemented R data access package in R for multiple platforms such as Azure Blob, SQL Server, data lake engines, etc.
* Worked with the investment team and implemented a backend API for equity valuation models in Python.
* Led data science capstone projects with the University of Chicago and Roosevelt University student teams
* Conducted research projects such as back-testing, EDAs, and reinforcement learning for finance
* Azure data factory, spark, and other data engineering projects

**Data Science Instructor @ Coding Temple 1/2018 - 6/2018**

* Design and write data science class curriculum covering machine learning algorithms and programming languages.
* Lecturer of Database Design, NLP, Machine learning, Python, and Web development (Flask) classes

## **Data Science Capstone Consultant @ Spectrum Communications & Consulting 1/2018 - 8/2018**

* Research on Google Adwords problem for efficient ad text design ·
* Implemented ad auto-generation algorithm using predictive models with friendly web user interfaces ·
* Win the university of Chicago Honorable Capstone Showcase

**Software Engineer @ Echelon Consulting, L.L.C. 5/2012 - 9/2017**

* Visualization Price Reporting dashboard for Analysis: SQL Server, ASP Web API, Kendo UI,
* Athletic Club Website and Mobile App: Database design. ASP web API design and implementation. Drupal (PHP) and jQuery frontend implementation. Sales mobile iOS app with transaction functionalities (frontend to backend).
* Synergy Financial Analysis Project: Developed core financial web applications (with analysis and visualization components) for a global business using ASP.Net MVC, Dojo JS, and SQL Server
* Mobile Apps for a Global Law Firm: Implemented secured iOS/Android apps from backend to frontend (Objective C).
* Liferay Portal web application: Upgraded a company website for a global management consulting firm, and implemented the HR and portal website (Java).
* Location Tracking app: Implemented tracking system with hybrid app (Cordova) component

## **Software developer internships @ Space to Play 2/2012 - 4/2012**

* Accomplished a 3Ds Max plug-in in C++, which facilitates editing and visualization of urban 3D building models from a geo-spatial database.

## **Graduate Assistant and Tech support @ CDM, DePaul University 01/2011 - 03/2012**

## **Network Engineer @ China Mobile 08/2007 - 03/2009**

* Maintained a central node of the company’s PSTN network.
* Analytics tools development for a multi-million equipment upgrading project.