# Mark Smith

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## Personal Profile

Software developer with extensive experience in developing real time trading applications and formal training in UX and data visualization. Seeking a position that leverages all of these experiences and allows me to expand upon my data visualization work. A team player who thrives in collaborative groups and relishes the opportunity to learn new skills and technologies.

## Skills Overview

Over the past 12 months I have worked with a wide range of technologies, each is listed below.

| Technology | Expertise | Years Experience |
| --- | --- | --- |
| C# | Expert | 15 |
| WPF | Close to Expert | 8 |
| HTML | Working Knowledge | 8 |
| Javascript | Working Knowledge | 5 |
| React | Working knowledge | 5 |
| Python | Working Knowledge | 5 |

## Work Experience

### 3Red Partners

Software Engineer, 2019 - 2021 - Chicago, IL

- Working with the trading desk and quantitive engineers implemented features in a real time futures trading application that streamlined trader workflow. Providing insight into market participants actions and the state of grey box trading algorithms.
- Designed, implemented, tested and delivered data visualizations of historical market activity creating custom WPF displays.
- Designed, implemented, and tested an order tracking application capable tabulating over 15 million records. The solution utilized a React front-end along with python Microservices to provide data and user authentication
- Refactored and streamlined legacy code, creating unit tests to ensure code quality.

### Magnetar Capital

Senior Software Engineer, 2016 - 2019 - Evanston, IL

- Gathered requirements, designed, implemented and tested Magnetars next generation front end trading system, utilizing a thin client design leveraging a WPF front end along with GRPC and .NET core backend.
- Designed, implemented, tested and delivered a bulk order import for the front desk. Enabled drag and drop trade entry via email into Magnetars proprietary trading system, increasing front desk productivity.

- Designed, implemented, tested and delivered a compliance post trade reporting system. Ensures regulatory targets are met for a range retail investment products. Solution was implemented using React, javascript and a ASP back end.
- Refactored and streamlined legacy code. Automated build, testing and packaging procedures which improved developer workflow.
- Maintained and developed post trade allocation system utilizing python.
- Vetted, interviewed and hired highly productive engineers for Magnetar's Executions team.

## Citadel Investment Group                                                     Chicago, IL
Senior Software Engineer, 2010 – 2016

- Created data visualizations and proof of concepts for Citadel's global equity portfolio managers. These visualizations displayed data in realtime and provided insight into portfolio performance.
- Produced visualizations for a web dashboard using Javascript, D3, React and Redux.
- Interviewed and hired successful engineers for Citadel's high frequency trading operations.
- Worked alongside traders to develop new ideas for trading applications, features. Produced a graphical way to indicate risk numbers into an option pricing grid, providing traders with risk assessment for all option strikes.
- Designed, implemented and tested front end software using C# and WPF for the options market making desk.
- Designed and implemented .NET software with both C# and WPF front ends that consumed data from multiple sources effectively using a multi threaded MVC and MVVM design patterns.
- Developed applications that enabled traders to view data in real time and control on of the largest Options Market Making systems in the US.

## Bengal Capital, LLC                                                          Chicago, IL
Software Engineer, 2008 – 2010

- Created and maintained code for a distributed real time trading system, using C# and Microsoft.NET.
- Optimized options pricing application and completely redesigned application front end and communication layer enabling the application to display market quotes in real time.
- Designed and implemented a distributed market data solution.  The redesigned system increased consumption of market data by 60%.
- Redesigned existing application servers which increased throughput of data processing capacity by 40%. Reduced system deadlocks and prevented the need for intra-day server re-boots.
- Collaborated with traders and quantitative engineers to produce analytical idea generation tools.  Utilized C#, WCF, Python and the Pylons framework to implement applications.

## Chicago Trading Company                                                      Chicago, IL
Software Engineer, 2005 – 2008

- Worked with quantitative engineers to provide a framework to house analytical models.
- Worked alongside traders to design and implement features for trading application front end, using C#, C++, VB and COM.
- Redesigned database queries optimizing loading processes for a variety of trading applications.
- Designed, implemented and tested instant chat application with trade specific features, increasing clarity of business related messages.
- Worked alongside floor traders to design, implement and trouble-shoot a company trading chat application.

# Education

## DePaul University Masters Degree Human Computer Interaction - 2016

- Focus of study included data visualization, prototyping, and social networks
- Studied and implemented user centric design principles
- Studied and implemented usability testing and evaluation

## DePaul University Bachelor of Science, Computer Science

- Dean's List, Graduated with high honors
- GPA 3.71/4.0 scale

## Falmouth School of Art and Design Higher National Diploma Illustration

- Studied painting and drawing and art history
- Mastered the basic principles of color theory and design