

Kris Harper

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Brooklyn, NY
11218

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<http://github.com/krispharper>

EDUCATION

University of Chicago Chicago, IL

- B.A. in Mathematics with Honors, June 2011
- Minor in Physics

CFA Charter - Passed all three exam levels, June 2014

FRM Designation - Currently studying

WORK EXPERIENCE

Senior Software Developer (Vice President)

Software Development Team

Annaly Capital Management

June 2011 to Present

- Develop for a front office portfolio management system used for agency and non-agency MBS, TBAs, CMBS, swaps, rates products, and repo. Written in C# with DevExpress controls, utilizing WCF and SQL Server
- Code against PolyPaths for mortgage analytics and scenario analysis. Integrate analytics data into systems throughout the firm for use by traders, portfolio managers, and the risk team
- Designed and developed a FIX message routing system which processes multiple incoming trade feeds and updates Bloomberg TOMS with trade data via an outgoing FIX feed. Created a thin client to display sent and received trade data, allowing trade aggregation and replay
- Work on multiple SQL databases doing schema design, application data access, trade flow, and reporting. Experience with T-SQL programming, linked servers, permissioning, and Visual Studio database projects
- Integrated Bloomberg AIM with current systems. Implemented and manage real-time data communication between AIM and current systems via Bloomberg Gateway, ensuring data consistency using SQL constraints and transactions. Systems are connected using trade, position, pricing, and analytics feeds
- Develop and maintain a position management system for rates and repo desks at a broker-dealer. Integrated with TOMS and Phase3 via FIX messaging. Pricing updates via multiple sources including Bloomberg and IDC
- Use PowerShell for scripting, including SFTP transfer, batch processing, and development tools
- Extensive experience with Bloomberg including Data License, TOMS, AIM, and Core Terminal
- Full stack developer in a Microsoft environment using C#, SQL Server, WCF, and WinForms

Research Technician and Web Developer

Department of Planning, Analysis and Institutional Research

University of Alaska Fairbanks

December 2008 to June 2011

- Analyzed and managed data, specifically by building and maintaining a web interface in PHP with a MySQL database for user data access
- Created a rudimentary API for data retrieval using SAS to interface with an Oracle database
- Developed the UAF Factbook project for online, dynamic data queries

Undergraduate Research Position

Department of Mathematics

University of Chicago

Summers 2009, 2010

- Participated in an undergraduate research program, with an emphasis on algebraic number theory topology
- Paper title: *Explorations of Sperner's Lemma and its Connections to Brouwer's Fixed Point Theorem*
- Paper title: *Group Cohomology and Kummer Theory*

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Undergraduate Research Position *Department of Mathematics*

University of Washington Seattle
Summer 2008

- Performed independent undergraduate research in mathematics
- Paper title: *On the Recoverability of Amalgamated and Separated Graphs Using Medial Graphs*

Undergraduate Research Assistant *Department of Planning, Analysis and Institutional Research*

University of Alaska Fairbanks
May 2007 to September 2007

- Wrote and developed SAS code to analyze data and generate reports
- Constructed a peer institution comparison project to examine and evaluate similar data sets

SKILLS

Programming Languages: C#, SQL, Python, PowerShell, bash, HTML and CSS, L^AT_EX

Some experience with: Ruby, JavaScript, Haskell, Scheme, C, C++, PHP, SAS

Frameworks and Libraries: .NET, WCF, DevExpress, WinForms, QuickFIX, JQuery, Nlog

Some experience with: Rails, WPF, GTK, Intex

Software: vim, Visual Studio, git, TFS, PolyPaths, Bloomberg, AIM, TOMS, Excel

Operating Systems: OS X, Linux, Windows, some UNIX