Kris Harper

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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) Annaly Capital Management
Software Development Team 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 and Intex for mortgage analytics and scenario analysis
- 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
- 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 University of Alaska Fairbanks
Department of Planning, Analysis and Institutional Research 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 University of Chicago
Department of Mathematics 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*

Undergraduate Research Position University of Washington Seattle
Department of Mathematics Summer 2008

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

Undergraduate Research Assistant University of Alaska Fairbanks
Department of Planning, Analysis and Institutional Research 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, LaTeX
    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