Patrick Stetter

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Education

Rensselaer Polytechnic Institute — Troy, NY
BS Computer and Systems Engineering - Computer Science — *2007 - 2010*

- GPA: 3.64 – Cum Laude – Rensselaer Medal Recipient – Dean's List 2007 - 2010

Experience

Bloomberg L.P. — New York, NY
Team Lead - Curve Analytics - Derivatives — *2016 - Present*

- Technical lead for the Linux Migration project for the Derivatives department, an area spanning a few hundred C/C++/Fortran libraries, over 200 developers, and thousands of executables. Collaborated with teams in Software Infrastructure and Financial Analytics to tactically re-architect key legacy systems and remove cyclic dependencies.
- Successfully migrated the interest rate curve system of legacy libraries to Linux while maintaining backward compatibility with thousands of existing interfaces. As a widely used low level system in financial analytics, this unblocked the Linux migration for many other groups. Removal of all the legacy cycles and upcalls resulted in a halving of the size of binaries deployed against these libraries. This approach was then replicated by multiple teams outside of Derivatives.
- Project lead for LIBOR transition in interest rate curves. This is a fundamental change across the interest rate domain that requires updates to nearly all benchmarks and financial contracts that have been used for decades. Planned and executed the migration of 300+ LIBOR based curve calibrations to Risk-Free-Rates (RFR) analytics.
- Developed a new analytics solution for calculating OIS style swap curves, correcting decades old approximations and workarounds. This laid the foundation to support RFR analytics.
- Lead the team to support the acquisition of the Barclays Fixed Income Indices. This required developing solutions to integrate Bloomberg market data with the existing third-party Barclays pricing system while ensuring accurate valuations during the transition.
- Built and managed a team of 7 developers responsible for core software frameworks and data that are used throughout Bloomberg products. Provided ongoing technical mentorship and advocated best practices for reliability, scalability, and reusability.

Bloomberg L.P. — New York, NY
Engineer - Curve Analytics - Derivatives — *2014 - 2016*

- Created the Relative Value (RV) family of curves, which have become Bloomberg's flagship treasury splines. The splines power risk measurements behind Bloomberg Indices, PORT, and more.
- Technical lead for the creation of a high performance, data driven curve building framework written in C++. The framework supports all interest rate curve calibration and analysis at Bloomberg, serving billions of requests each day.
- Developed support for treasury and sector curve calibration which allowed consolidation of all of Bloomberg's interest rate curve analytics under a single framework.
- Created a Jenkins CI/CD workflow and migrated the team's codebase to git and DPKG.

Bloomberg L.P. New York, NY
Engineer - Structured Notes and Interest Rate Derivatives *2011 - 2014*

- Lead developer for bond analytics in the early years of Bloomberg's Multi-Asset Risk System (MARS). Developed scalable pricing services to support high throughput OAS calculations for a universe of millions of fixed income products.
- Built a highly optimized expression tree based pricer for ASW-Spread and Z-Spread analysis that supports real-time market making in Bloomberg's ETOMS product. The framework achieved 1μs valuation times and portability to amd64 while remaining compatible and numerically consistent with a legacy big endian system.
- Extended Bloomberg's OAS, Z-Spread, and ASW-Spread pricers to support Preferreds, Municipal Bonds, Money Markets. Worked with the quant team to develop Bloomberg's Hybrid HW1F Credit Model.
- Onboarded the bond analytics for Bloomberg's AUSBond series of Indices.

IBM — RPI DesignLab Troy, NY
Team Member *Fall 2010*

- Contributed portability patches to libVirt to support cloud computing on IBM's System Z.

Bloomberg L.P. New York, NY
Engineering Intern - Convertible Bonds *Summer 2010*

- Built CVU1, a tool for the global data team to manage expected and realized dividends for convertibles.
- Developed backend components to support a rewrite of Bloomberg convertible bond analysis pricer OVCV.

Agfa/Heartlab Westerly, RI
Engineering Intern *Summer 2007*

- Built developer tooling in Java to automate manual XML maintenance behind Heartlab's embedded hospital software.

Skills

Programming Languages: C++, C, Python, JavaScript, Perl, LaTeX, z80 Assembly.

Leadership: Building high performance teams. Collaboration. Agile software development. Strong verbal and written communication.

Finance: Advanced Fixed Income and Interest Rate Derivatives Analysis. Market Data Calibration.

Athletics: Running (Marathoner), Alpine Skiing, and Hiking.