# Filip Fracz

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# **Work Experience**

Trading
Technologies
International, Inc.
2006 – present

#### Principal Software Engineer

- Developing high performance algorithmic trading server securely hosting customer-written strategies.
   Architected next-generation trading API known as TT SDK. Technologies used: Linux, raw C, C++14
- Architected the foundation for TT's mobile trading app targeting iPhones and iPads. Technologies used: Objective-C, OS X, JSON, Git, Cocoa Pods
- Created a fresh, modern, mobile Android trading app which connects to TT's cloud platform. The application covers almost all of the main features found on desktop equivalents. Technologies used: Android, Java, JSON, C# 5.0, Xamarin tools, Git
- Developed TT's newest cloud-based trading platform. Technologies used: C++11, STL, Linux, Protocol Buffers, LBM, Python, Java, Scala, Amazon Web Services (AWS).
- Main architect of the next-generation managed trading library for automated trading systems TT API.
   C#, C++/CLI, .NET 4.0
- Involved in design and implementation of AlgoSE algorithmic trading server and Algo Design Lab client application. C#, C++/CLI, Windows Forms, WPF.
- Worked on a high performance X\_TRADER trading application. C++, STL, Win32, MFC, C++/CLI, C#.
- Implemented numerous usability improvements to the GUI, making the application faster, easier and more pleasant to use. Technologies used: Windows Forms, WPF, MFC.
- Re-architected legacy code to take advantage of multi-core systems. C++, C#
- Performed various micro- and macro-optimizations of existing code, both in C#, C++/CLI and C++.
- Designed and developed several key modules of X TRADER.
- Bridged new .NET code with legacy C++ MFC sources. Technologies used: C#, COM, C++, C++/CLI

Intelilinks, LLC 2005 – 2006

#### Software Architect

• Designed and developed Intelilinks' flagship product from the ground up using C# 2.0, Microsoft SQL Server Express, and ASP.NET Web Services.

OptiMetrics, Inc. 2002 – 2006

### Computer Programmer and Data Analyst

- Developed slick Java GUI for thermal image analysis software originally written in Fortran and C++, remarkably improving usability.
- Researched new intelligent data input technology involving eye trackers; later implemented into commercial game engine.
- Developed computerized training manual for Stryker Light Armored Vehicle using PHP, Apache and MySQL; later deployed to troops in Iraq.
- Acquired interim security clearance.
- Worked on quantum computer project sponsored by DARPA; created Java applets allowing scientists to publish quantum circuit diagrams online.
- Contracted to US Army Tank and Automotive Command to assist in camouflage evaluation using Maple and Matlab software.

## **Education**

University of Michigan Ann Arbor, MI 2002 – 2005 Bachelor of Science and Engineering in Computer Science

Coursework: Computer Security, Software Engineering, Distributed Computing, Networking, Databases, Web Databases, Computer Graphics, Operating Systems, Differential Equations, German, Digital Photography, History, Polish Literature

# Computer Skills, Hobbies, etc

- C# 5.0, C++14, C++/CLI, STL, Boost, Windows Forms, WPF, Silverlight, Windows Phone 7, Java, Android, Win32, MFC, PHP, SQL, XML, XSLT, Boo, Python, iOS, Objective-C
- Created several Windows Phone 7 applications during spare time. My mortgage calculator "Mo Calc" used to be in the top 10 free finance apps.
- Participant in local GiveCamp.org events coding for charity.