

Mark Ibrahim

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SKILLS AND INTERESTS

- Python (Flask, numpy, pandas, matplotlib, object-oriented), bash, git, VIM, Latex, SQL, html, css, jQuery, JavaScript
 - Gighacks Burlington 2015: “*most innovative app*”; civic engagement through video search
 - UVM Agile CodeFest: *1st place winner*; interactive map of free food on campus
 - Co-organizer of Burlington Python User Group: taught beginner [Python Workshop](#)
 - Fluent in oral and written French, selected to independently lead University French discussion groups
 - Jazz/classical piano, cognitive bias psychology, phenomenology, existentialism, Bob Dylan, good food
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EXPERIENCE

UBS Graduate Training Program, Risk Management

New York, NY

UBS Investment Bank, *Fixed Income Market Risk Manager*

2013 – fall 2014

Revolutionized management of curve exposure, not captured under bank’s standard risk framework

- Invented matrix sorting algorithm revealing and ranking \$567k of uncaptured sensitivity per basis point
 - Identified poor curve positioning via Principal Component Analysis of 6-month sector curve dynamics
- Transformed risk metric evaluation \$658m Credit Portfolio from daily manual 2½ hours to nearly instant
- Tailored Python scripts yield full metric view, communicating with proprietary Value-at-Risk engine

UBS Wealth Management, *Credit Risk, Collateral Evaluation*


Jun 2011 – Jan 2013

Single-handedly developed alert algorithm monitoring collateral concentrations against live market data

- GUI in Visual Basic incorporating screened headlines from RSS feeds and alert parameters
 - Presented to CRO, CFO who enthusiastically endorsed implementation across all \$22.2bn loan portfolios
- Reset FX risk model threshold uncovering 9 facilities accounted for 85% of risk within large data set

Condé Nast, *freelance development*

fall 2014– 2015

Social Media Posts App : automate and tag all Facebook and Twitter posts

JavaScript Google Calendar Extension: synchronize web production across team of writers/editors

PROJECTS

Wikipedia’s First Link Network, 4.6 million articles analyzed with supercomputer cluster

“What’s so special about Philosophy? Unraveling Wikipedia’s First Link Network”—[Spring 2015, UVM](#)

Tappt, *co-founder* ([tappt](#)): instantly search video with human speech; “most innovative” —Gighacks 2015

Mathematical Association (MAA) Seaway Section 2012, presented senior project on cryptography

“*Secret Sharing Schemes using Lagrange and Newton Interpolation*”

EDUCATION

University of Vermont, *Masters in Mathematics (expected May 2016)*

Burlington, VT

Sole Instructor: [Calculus I](#) (72 students) and [Calculus II](#) (38 students)

Hamilton College, *Honors B.A. Mathematics, Magna Cum Laude*

Clinton, NY

[19th Gold Scholar](#) for student of “highest standards.” *Phi Sigma Iota*: highest honor for foreign languages

L’Institut d’études politiques, Sciences-Po

Paris, France

Full-year academically intense immersion program, exclusively in French