Mark Ibrahim

mark.ibhm@gmail.com • (973) 459-8429 • markibrahim.me

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

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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.co): 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