

# Iryna Iglehart

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## PROFESSIONAL EXPERIENCE

### Autoschematic (Downingtown, PA)

October 2015 - Current

#### Quantitative Analyst

- Assisted in designing a web-based platform business for short story writers to develop material from on-line public submissions of platform members creating a form of “social collaborative serial fiction” and presenting the story to the user in a “choose your own adventure” format
  - Collected on-line ideas from over 137 people located in 10 countries and 19 states with some people submitting multiple story line ideas
  - Created algorithm to judge winners based on variables such as submission date and the number of absolute votes derived from presenting multiple idea submissions in alternating orders
  - Made process improvements in the areas of application design, user interface design, user experience testing and data collection resulting in a much-improved overall outcome than originally planned
- Conceived of multiple practical and theoretical avenues of researching bitcoin activities, initially starting without a goal
  - Exploring writing algorithms and leveraging big data machine learning strategies to predict changes in Bitcoin prices on several global bitcoin exchanges to automatically execute trades at high frequency
  - Designed data architecture by selecting best case database, organized tables, and chose columns of data needing indexing for query performance considerations
- De-bugged client web application written in JavaScript, React, MongoDB and MeteorJS by discovering root causes and working with company’s chief software architect to suggest methods to enhance website’s design and architecture
- Created websites for multiple small businesses, recommending webpage design ideas (accepted by clients), and leveraging website framework and fine-tuning UI/UX to enhance features like e-commerce activities
- Performed project management function for all company-wide projects including ensuring deadlines, promoting inter-departmental communication, and client product delivery
- Performed key internal business functions such as budgeting, allocation of funds, payroll, and tax statements

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## EDUCATION

### Udemy.com/Coursera.org

2016 - Current

- Key coursework: **Finance, JavaScript/Tableau/SQL, and Python:** *Financial markets, JavaScript: Understanding the Weird Parts, Learn and Understand NodeJS, Business Metrics for Data-Driven Companies, Data Visualization and Communication with Tableau, Introduction to Structured Query Language (SQL), Python Data Structures, Using Python to Access Web Data, Using Databases with Python*

### University of Kent (Canterbury, UK)

2016

#### M.Sc. Finance and Statistics

- Key coursework: Stochastic Processes and Insurance Risk, Advanced Regression Modeling, Mathematics of Financial Derivatives, Practical Statistics and Computing

### University of Kent (Canterbury, UK)

2014

#### B.Sc. Mathematics and Statistics

- Key coursework: Linear Programming and its Application, Computational Mathematics, Finance and Financial Reporting for Actuarial Science, Time Series Modeling and Simulation

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## TECHNICAL PROJECTS

### Matrix Optimization Problem in Finance: Master’s Project

- Wrote algorithm in R to estimate missing prices from a history of stock’s daily data to improve forecasting methodologies
- Utilized data methodologies including alternating projections method, difference map algorithm, semidefinite programming approach, quadratically convergent Newton method, and majorization algorithm
- Tested algorithm on stocks with full pricing history by removing data points and estimating prices by using the Alternating Projections Method in R to achieve convergence of a 500x500 matrix in about 4 minutes

### Solvability in Quantum Mechanics: Bachelor’s Project

- Researched multiple mathematical solutions to the Schrödinger equation problem in Quantum Mechanics
- Utilized MATLAB to create 3D representations of solutions to gain a better understand of mathematicians’ progress in solving the Schrödinger equation

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## SKILLS/INTERESTS/CERTIFICATIONS

**Languages:** Fluent in English, Ukrainian, Russian

**Software:** Tableau, Python, R, JavaScript, HTML, CSS, Squarespace, git, SQL, Access, Excel, Word, LaTeX, Maple, MATLAB

**Certifications:** Certificate in Management Accounting; Bloomberg Market Concepts Certificate