|  |
| --- |
| **Heather Elizabeth Dempsey** |
| Email: [dempseyh\_e@yahoo.com](about:blank) | Phone: (203) 456-5557 | Website: [www.hedempsey.com](about:blank) |
| 62 N. Park Ave | Easton, CT 06612 | [https://www.linkedin.com/in/heather-dempsey-a114b0128/](about:blank) |

**EDUCATION**

|  |  |  |
| --- | --- | --- |
| Sacred Heart University, Fairfield, Connecticut – Current GPA: 3.9 |  | Expected April 2021 |
| Doctor of Business Administration in Finance  *Dissertation: Traditional versus state-space models in hidden time-variant parameter estimation* |  |  |
|  |  |  |
| Sacred Heart University, Fairfield, Connecticut – GPA: 3.8 |  | June 2016 |
| Master of Science Computer Science and Information Technology  *Upsilon Pi Epsilon Honor Society, Mathematics Club* |  |  |
|  |  |  |
| University of Connecticut, Stamford, Connecticut – GPA 3.1 |  | May 2014 |
| Bachelor of Arts ACES Concentration Mathematics  *Economics Society* |  |  |
|  |  |  |
| Baruch City University of New York, Manhattan, New York – GPA 3.4 |  |  |
| Mathematics  *Student Government- Treasurer* |  |  |
|  |  |  |

**EXPERIENCE**

|  |  |
| --- | --- |
| Sacred Heart University, John Welch School of Business | Fairfield, CT |
| *Doctoral Candidate with Dr. Walker K. Hughen* | September 2016 – Current |
|  |  |

|  |  |
| --- | --- |
| * Arbitrage pricing theory | * Negative interest rates |
| * Mean-variance portfolio optimization | * Logit methodology in forecasting corporate bankruptcy |
| * Financial derivatives | * Forecasting US stock returns & random walk theory |
| * State-space models | * Pairs trading for the individual investor |
| * Econometrics * Interest rate structure | * Monte Carlo simulations * Machine learning |

|  |  |
| --- | --- |
|  |  |
|  |  |
| Karya Capital, LLP | Manhattan, NY |
| *Quantitative research intern* *under Dr. Lior Menzly* | August 2020 – Current |
| * Quantitative finance * Algorithmic and systematic trading * Strategy backtesting * Econometric forecasting | * Developed trade blotter GUI in C# WPF Dev Express * Developed options backtesting framework in Python * Designed MYSQL database for project * Derivative pricing calculators |
|  |  |

|  |  |
| --- | --- |
| Sacred Heart University, Computer Science Department | Fairfield, CT |
| *Graduate Student with Professor Moshe Cohen* | August 2014 – April 2016 |
| Thesis: Designed and implemented health system application |  |
|  |  |
| * Co-engineered software application in use in clinical trials at Yale-New Haven Hospital * Designed mobile app which uses quantitative metrics to track health progress of individuals with dual diagnosis who also smoke | * Coded GUI C# * Added real-time analytics * Graphical display |
|  |  |
| University of Connecticut, Economics Department | Stamford, CT |
| *Undergraduate independent study and research with Dr. William Alpert*  Econometrics | January 2014 – April 2014 |
| University of Connecticut, Mathematics Department | Stamford, CT |
| *Undergraduate independent study and research with Dr. Richard Watnick*  Ordinary differential equations | August 2012 – June 2013 |
| University of Connecticut, Mathematics Department | Stamford, CT |
| *Undergraduate independent studies and research with Dr. Christiano Husu*  Multivariate calculus , History of mathematics, Transition to advanced mathematics | January 2011 – June2013 |

**SKILLS and TECHNIQUES**

|  |  |
| --- | --- |
| * Vector auto regressive models * Exponential moving average * Expectation-maximization cluster algorithm * Generalized autoregressive conditional heteroskedasticity * COVID-19 susceptible/exposed/infected/removed (SEIR)—four state transition model | * Proficient Python/proficient C#/some XAML * Algorithmic trading/ statistical arbitrage * Gaussian mixture models * Visual Studio 2019, VS Code, Jupyter notebook, Spyder, MSSQL, MySQL, LaTeX, Git * Design and implement GUI in C# |

**INTERESTS and LAUNGUAGES**

|  |  |
| --- | --- |
| * Quantitative finance * AI/ machine learning | * English , Spanish (Proficient) * Automotive engineering |

**REFERENCES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Phone** | **Office** | **Email** | **Address** |
| Dr. Lucjian Orlowski | (203) 371-7858 | E-1110 | orlowskil@sacredheart.edu | 3135 Easton Tpke, Fairfield, CT 06828 |
| Dr. Walker Hughen | (203) 371-7953 | E-1154 | hughenw@sacredheart.edu | 3135 Easton Tpke, Fairfield, CT 06828 |
| Dr. Dmitre Udler | (203) 371-7953 | DBA | dmitryudler@hotmail.com | 3135 Easton Tpke, Fairfield, CT 06828 |
| Dr. Mark Ritter | (203) 365-4804 | DBA | ritterm@sacredheart.edu | 3135 Easton Tpke, Fairfield, CT 06828 |
| Moshe Cohen | (203) 396-8072 | C612 | cohenm@sacredheart.edu | 5151 Park Ave, Fairfield, CT 06825 |
| Dr. Richard Watnick | (203) 251-8420 | 338 | richard.watnick@uconn.edu | 1 University Pl, Stamford, CT 06901 |
|  |  |  |  |  |