JT Hamrick

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Summary

Research experience applying statistical methods to financial time series data.

Comfortable communicating complex data in written, verbal, and visual formats.

Co-authored multiple peer-reviewed scientific publications.

Primary field of study: cybersecurity and cryptocurrency cybercrime measurement.

Experience

Apache Offroad, Co-owner/IT Director, 2017–Present

- Tasked with building, updating, and maintaining web presence and related infrastructure.
- Scan and model products to manufacture for off-road applications.

University of Tulsa, Graduate Research Assistant, 2015–Present.

- Performed statistical analysis utilizing R, Python, and Stata.
- Worked closely with international team to develop a narrative from data analysis.
- Developed and maintained cybersecurity research data collection and storage infrastructure.
- Taught week long summer course for incoming research students to help familiarize them with the tools and technologies used in the computer science department.

rewardStyle, Software Engineer, 2013–2015.

- Built the first iteration of LikeToKnowIt with one other team member.
- Architected infrastructure for email system capable of sending over 100,000 emails daily.
- Interfaced and normalized data from dozens of third-party APIs for customer consumption.
- Built and maintained tools that assisted bloggers with maximizing potential earnings.

The Boss Group, Interactive Designer and Front-End Developer, 2012–2013

- Designed and developed fully functional websites for traditional and mobile platforms.
- Worked with clients such as Cheddar's and The Container Store to build tools to streamline workflow.

Dallas Mavericks, Interactive Intern, 2009–2010

- Worked closely with marketing, sales, and corporate accounts to maintain and update the website through the NBA's proprietary content management system.
- Performed mass email marketing tasks using Salesforce.com, and designed graphic elements with Photoshop and Illustrator.

Projects

Designed and maintained course project for Secure Electronic Commerce (CS 6013).

– Project built for safe exploitation and defense against well known vulnerabilities.
– Students tasked with securing Tornado web server and building custom web authentication and system for payment tokenization.
– Guest lecturer for course to introduce project and assist students with environment.

Built tool for forecasting crude oil prices in Excel.

– Utilized Bert to run R code from Excel.
– Forecasts created through the use of Facebook's Prophet R package.
– Tool run from Excel macro, pulls data from and pushes updates to specific sheet.

Education

Ph.D. Computer Science, The University of Tulsa, Expected Graduation May 2020.

  Dissertation Title: 'Price Manipulation in the Cryptocurrency Ecosystem'
  Supervisor: Prof. Tyler Moore

M.S. Computer Science, University of Tulsa, 2017.
B.S. Computer Science, University of North Texas, 2013.

Technical Skills

Languages: (Proficient) R, Python, PHP, SQL, (Familiar) Java, C/C++, Embedded C, Go, Shell Scripting
Technologies: MongoDB, Tornado web framework
Tools: Stata, LaTeX, Git, vmware/vCenter
Miscellaneous: 3D modeling (Fusion360), 3D printing

Competitions

2nd Place winner of the National Collegiate Cyber Defense Competition (NCCDC), 2017
2nd Place winner of the Southwest Collegiate Cyber Defense Competition (CCDC), 2018

Select Publications

JT Hamrick, Farhang Rouhi, Arghya Mukherjee, Amir Feder, Neil Gandal, Tyler Moore, Marie Vasek. The economics of cryptocurrency pump and dump schemes. In *18th Workshop on the Economics of Information Security (WEIS)*, 2019.

Amir Feder, Neil Gandal, **JT Hamrick**, Tyler Moore, and Marie Vasek. The rise and fall of cryptocurrencies. In *17th Workshop on the Economics of Information Security (WEIS)*, 2018.

Neil Gandal, **JT Hamrick**, Tyler Moore, and Tali Obermann. Price manipulation in the Bitcoin ecosystem. *Journal of Monetary Economics*, 95:86–96, May 2018.

Amir Feder, Neil Gandal, **JT Hamrick**, and Tyler Moore. The impact of DDoS and other security shocks on Bitcoin currency exchanges: Evidence from Mt. Gox. In *15th Workshop on the Economics of Information Security (WEIS)*, 2016.

Select Presentations

Invited Panelist for Inside Cyber, Southern Methodist University, Dallas, TX, May 2019.

"The rise and fall of cryptocurrencies". Presentation at 17th Workshop on the Economics of Information Security (WEIS), Innsbruck, Austria, June 2018.

"Price Manipulation in the Bitcoin Ecosystem". Presentation at 16th Workshop on the Economics of Information Security (WEIS), La Jolla, CA, June 2017. Presentation at the Annual meeting of the Central Bank Research Association, Bank of Canada, Ottawa, ON, Canada, July 2017.

"The Impact of DDoS and Other Security Shocks on Bitcoin Currency Exchanges: Evidence from Mt. Gox". Presentation at 15th Workshop on the Economics of Information Security (WEIS), Berkeley, CA, June 2016.