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Avery Buehler

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EDUCATION

University of Hartford — West Hartford, CT
Bachelor of Science in Computer Science — May 2019
Minor: Mathematics — GPA: 3.94/4.00

Honors Thesis: "Analysis of Neural Networks with Time Delays" (Advisor: Dr. Hwayeon Ryu)
Related Coursework: Architecture & Assembly Language, Data Structures, Data Mining, Concepts Programming Languages, Software Development, Systems Programming, Discrete Mathematics, Linear Algebra, Differential Equations, Calculus III

PROFESSIONAL EXPERIENCE

Software Architect Intern — Hartford, CT
The Travelers Companies, Inc. — September 2018 – Present

- Currently working in the Travelers Innovation Center (TIC) researching and implementing the latest advancements in areas such as: artificial intelligence and machine learning, blockchain, virtual reality, augmented reality, and others
- Working 16+ hours per week while maintaining full academic course load

Software Engineering Intern — Hartford, CT
The Hartford Financial Services Group, Inc. — May 2018 – August 2018

- Selected through a competitive interview process to join the Early Career Leadership Development Program (ECLDP) on the Technology & Data track assigned to the Bond IT Department
- Developed 6 major user stories over the course of 4 sprints to update the company's largest web-based application
- Communicated with internal stakeholders as part of a large Scrum Team (Agile methodology) to ensure the delivery of new features and maintenance updates in two-week iterations (sprints)
- Collaborated with senior members of the premium audit team throughout 10-weeks to research, evaluate, and propose a method to increase the digital adoption rate of 115k small business owners to The Hartford's new online auditing platform
- Offered a full-time ECLDP associate position

Undergraduate Teaching Assistant — West Hartford, CT
University of Hartford Department of Computer Science — January 2018 – May 2018

- Instructed an intermediate Java course of ~15 students throughout each week by designing lectures, fielding questions, demonstrating fundamental programming techniques, leading discussions, and grading student assignments and projects
- Tutored students on a daily basis in both one-on-one and group sessions to help facilitate key course competencies

Information Technology Intern — Hartford, CT
Axinn, Veltrop & Harkrider LLP. — June 2017 – August 2017

- Integrated web harvesting software with Visualping to monitor, extract, and store data changes for pharmaceutical drugs
- Troubleshot issues with all enterprise technology and applications, responding promptly to partner's needs and requests
- Assisted in maintaining an accurate inventory of technology assets and technology related components for the purpose of cost control, efficient operation, and support of the technology infrastructure

RESEARCH EXPERIENCE

Analysis of Neural Networks with Time Delays — University of Hartford
Advisor: Dr. Hwayeon Ryu — April 2018 – Present

- Currently researching biologically realistic neural networks with coupling delays as my undergraduate honors thesis
- Mathematically modeling the generated pattern formations of neural networks as heterogeneous properties are added
- Studying the interaction between the coupling delays and heterogeneous properties in the context of network behaviors
- Applying to present at the 2019 National Conference on Undergraduate Research (NCUR) with University funding

Algorithmic Game Theory University of Hartford
Advisor: Dr. Zhuojun Duan September 2018 – Present

- Currently researching subsets of Nash equilibrium and second-price sealed-bid (Vickrey) auctions
- Calculating and proving various properties of Vickrey auctions based on their Nash equilibria
- Applying to present at the 2019 International Conference on Wireless Algorithms, Systems, and Applications (WASA)

Cryptography and Number Theory University of Hartford
Advisor: Dr. Alicia Marino August 2017 – December 2017

- Researched elementary number theory, cryptography and cryptosystems as an independent study in mathematics
- Studied advanced topics such as post-quantum cryptography and lattice-based cryptosystems
- Implemented RSA (Rivest-Shamir-Adleman) and GGH (Goldreich-Goldwasser-Halevi) encryption schemes in Java

SPECIALIZED SKILLS

- **Programming Languages:** Proficient in Java, C, C++, JavaScript; familiar with Python, Ruby, Prolog, Standard ML; previously used Assembly Language (ARM), MATLAB, VHDL
- **Tools:** Docker, Jenkins, Maven, Git, GitHub, Slack, Bootstrap, Weka, QEMU, Keras, TensorFlow, PyTorch, Caffe
- **Languages:** English (native), Spanish (proficient)

HONORS AND AWARDS

- University of Hartford Junior Achievement Award Fall 2017 – Spring 2018
- Kappa Mu/Tau Beta Pi/Dean Zerban Endowed Scholarship Fall 2016 – Spring 2017
- University of Hartford President's List Fall 2015 – Present
- University of Hartford Dean's List Fall 2015 – Present

VOLUNTEERING

- **Hartford's Camp Courant** – Camp Counselor August 2018
- **Junior Achievement of Southwest New England, Inc.** – Teacher August 2018
- **UConn John Dempsey Hospital** – Emergency Room Liaison November 2017 – March 2018
- **Soup Kitchen Cook** – St. Patrick's Church November 2013 – November 2016