Yuan-Chih Hsieh

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OBJECTIVE

1st year Applied Mathematics Ph.D. student with 4 years of coding experience and expertise in large dataset management, seeking a role in software development or machine learning

EDUCATION

The University of Maryland | College Park, MD | May 2028
Ph.D. in Applied Mathematics & Statistics, and Scientific Computation

The Pennsylvania State University | University Park, PA | May 2023
Bachelor of Science in Computer Science | Cum Laude
Bachelor of Science in Meteorology and Atmospheric Science | Magna Cum Laude
- Cumulative GPA: 3.89; Dean's List
- The President's Freshman Award, The Evan Pugh Scholar Junior Award, Chelius Family Scholarship

WORK EXPERIENCE

Teaching Assistant for Applied Probability and Statistics | Department of Math, University of Maryland
College Park, MD | Aug 2023 – Present
- Conducted engaging weekly classes covering complex statistical topics, fostering critical thinking among students
- Administered quizzes aimed at reinforcing course objectives, resulting in enhanced student comprehension

Learning Assistant for Data Structures & Algorithms | Department of Computer Science, Pennsylvania State University
University Park, PA | Aug 2022 – May 2023
- Evaluated weekly assignments on various data structures & algorithms, providing constructive feedback to 100+ students
- Addressing individual questions and concerns, created dynamic learning environment by actively engaging students

Undergraduate Researcher | Department of Meteorology and Atmospheric Science, Pennsylvania State University
University Park, PA | May 2022 – May 2023
- Employed advanced Data Assimilation techniques to organize and analyze more than 20,000+ Mesoscale Convective Systems in tropical region weather data, utilizing Pandas, NumPy, and Matplotlib
- Achieved a 50% optimization in algorithmic implementation, identifying the most suitable system within the dataset

Software Engineer Intern | Compal Electronics
Taipei, Taiwan | Jun – Aug 2021
- Enhanced accessibility by integrating Deep Learning models into user-friendly website and mobile app using Flask and Kotlin
- Developed a Docker container, ensuring seamless compatibility across various client devices
- Implemented SQL database with user authentication and support for multiple databases catering to diverse user needs

LEADERSHIP

President | Taiwanese American Student Association, Pennsylvania State University
University Park, PA | Apr 2021 – Mar 2022
- Fostered collaborative partnerships and strengthened external relations by negotiating with external entities
- Demonstrated strong organizational and leadership skills by delegating tasks to team members to hold successful events

PERSONAL PROJECTS

Operating System Construction | Sep – Dec 2022
- Crafted a thread scheduler with CPU policies, semaphore support, and a dynamic memory management system
- Implemented a virtual memory manager for efficient paging, optimizing overall system performance

TECHNICAL SKILLS & COURSEWORK

Technical Skills: **Python**, **C**, **GitHub**, **Linux**, **SQL**, REST, JavaScript, React, PHP, Java, HTML, CSS, Kotlin, Julia, Docker
Coursework: **Algorithms and Data Structures**, **Machine Learning**, **Numerical Analysis, Linear Algebra**,
Parallel Computing, Scientific Computing, Database Management Design, Programming Language Concepts, Operating Systems**,** Theory of Computation