Tangbaihe Wang

wangtangbaihe1009@ gmail.com | 530-231-0038 | 515 Sycamore Ln, Davis, CA

Education

University of California, Davis (GPA: 3.72/4.0) Sep. 2020- Dec. 2024
B.S in Computer Science; B.A in Design (*UI/UX Concentration*)
Awards & Scholarships: Dean's List (FQ 2020); Dean's List (WQ 2021); Yampol Scholarship (2022-2023);
Relevant Coursework: Discrete Math, Algorithm Design and Analysis, Operating System, Computer Networks, Introduction to Machine Learning, Computer Architecture

Publications

- **FP-Inconsistent: Detecting Evasive Bots using Browser Fingerprint Inconsistencies** 2024
  Hari Venugopalan, Shaoor Munir, Shuaib Ahmed, **Tangbaihe Wang**, Samuel T. King, Zubair Shafiq
  Under Review for ACM Internet Measurement Conference, Arxiv Preprint

Research Experiences

University of California, Davis Sep. 2022 – Jun. 2024
Undergraduate Research Assistant
Advisor: Prof. Zubair Shafiq
- Conduct the first large-scale evaluation of evasive bots to investigate how fingerprint alterations affect detection evasion
- Developed honeypot sites to harvest data, integrated commercial anti-bot service
- Created FP-Inconsistent, a data-driven method to detect browser fingerprint inconsistencies for better bot detection
- Measured and analyzed commercial bot behaviors, uncovering inconsistencies to enhance detection of evasive bot tactics

University of California, Davis Jan. 2023 – Mar. 2023
Undergraduate Research Intern
Advisor: Prof. Hao-Chuan Wang
- Conducted independent user research sessions for ConceptCombo, which helps novices find quality videos by extracting concept maps and visualizing user comment summaries in a treemap
- Developed a front-end interface integrating pre- and post-experiment surveys, tutorials, and user acknowledgements to streamline user research sessions
- Tested and validated the online user research session for DeepThinkingMap, enabling collaborative group reflection and sharing

Work Experiences

Microsoft Jun. 2024 – Sep. 2024
Product Management Intern
Project #1: Headcount Management Platform
- Led the redesign and launch of the internal headcount management platform, conducting user research with 30+ active users to address pain points, reducing hiring costs by 2% and improve efficiency by 12+ hours weekly
- Defined and executed product strategy through pain-point analysis and stakeholder alignment, focusing on enhance data synchronization, prioritizing migrating key business operations, ultimately targeting a 45% efficiency improvement

Project #2: AI Newsletter
- Incubated AI Newsletter, a GPT-based service that delivers personalized AI news to employee inboxes daily, currently benefiting 250+ employees within Microsoft's MAI organization upon initial MVP Launch
- Led cross-functional collaboration with 3 Principal Applied Scientists from Bing Feeds to build a secure data pipeline and design recommendation system metrics, including content selection, feedback, and keyword scope

Microsoft Jun. 2023 – Sep. 2023
Software Development Intern | Redmond, WA
- Redesigned and Implemented data synchronization service within the ingestion cluster of the Intune distributed database service using C# and SQL
- Achieved a 35% reduction in memory and CPU usage for processing 1 billion data points daily, while lowering average query execution time from 2000 ms to 250 ms by eliminating high cardinality joins through the redesign
- Deployed feature to enable ad-hoc query generation, enhancing support for major internal customers

Astoria Ai. Jun. 2022 – Aug. 2022
Software Development Intern | New York, NY
- Worked with an infrastructure team to set up corporate Azure DevOps with CI/CD version control,

- Build Azure pipeline to sync Github Repository and Azure Repo with PowerShell, effectively reduced the cost by 30%
- Designed and developed a relational database schema in MySQL to persist, manage, and process candidate information

Takasho. May. 2021 – Sep. 2021

Front-End Developer

- Developed the new front-end for takasho website using React and Redux, enabling the company to advertise and sell their products
- Implemented 20+ front-end pages, including overview, product description, and individual product case pages, resulting in a **40%** increase in user registration and a **140%** rise in website visitors

Class Project

UC Davis Centennial Seal Project | *THREE.js, JavaScript, HTML5, CSS3, Ajax* Apr. 2023- Jun. 2023

- Designed and build an interactive 3D website to celebrate the community culture of Davis
- Project was selected and featured by the City of Davis's to celebrate Centennial Seal Community Project

Sign Language Learning Glove | *C#,* OpenAI API, *Arduino, Circuit Design, Sensors* Jan. 2024- Mar. 2024

- Designed and developed wearable technology to gamify the learning of American Sign Language for deaf children through providing fun and instant feedback.
- Developed an IOS App prototype, enable children to co-create unique story through spelling words with Sign Language Glove
- Integrating DALL-E API to convert visuals from children's description on character, enhancing immersive storytelling process

Simple Shell | *C/C++, Shell, Makefile, Linux* Apr. 2023- Jun. 2023

- Built a simple command line interface that support features include piping, output redirection, and environmental variables

Small Twitter | *Java, Spring Boot, PostgreSQL, Redis* Apr. 2023- Jun. 2023

- Designed and implemented a RestfulAPI service for Twitter delivery and search-query using Spring Boot, along with a relational database schema in PostgreSQL to manage data
- Developed caching strategy with Redis to reduce response latency for users by 55% and improve for high traffic scenario
- Implementing parallel data processing pipeline with Apache Beam to handle large-scale Twitter content query efficiently

Leadership & Activities

#Include at UC Davis | Technical Cohort Member Oct 2021- May 2022

- Worked with a team of 3 engineers to produce a website for local minority organization New Vietnam Studies Initiative

Booky Green | Founder Jun 2021- May 2022

- Led a team of 30+ members to plan and execute events aimed at supporting literacy in underprivileged schools
- Secured $5,000 in sponsorship from local companies to fund the development of a new school library

Technical Skills

- Programming: JavaScript, Python, C/C++, C#, Java, HTML5, CSS3, SQL, Shell
- Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, LaTeX, MATLAB
- Libraries: React, Node.js, Next.js, Express.js, Spring Boot, Redis, PyTorch, Tensorflow, Scikit-Learn