

Research Statement

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Education Research

The educational landscape is evolving. With new technologies and greater access to information for students, students' learning needs are changing too. In the fields of computer science and information systems, these are advancing rapidly which calls for exploring how education might need to align to industry and students' needs. Research in education within these areas is increasingly essential, as teaching computer science courses presents unique challenges in the subject matter's complexity.

Identifying research problems is often a result of my interactions with faculty and students during courses. Students' feedback about their preference to learn and share experiences offers valuable insights. In my classes, I will explore approaches to address diverse pedagogical needs and experiment with different pedagogical methods. Engaging students enriches this process by providing perspectives from a student's viewpoint, which can offer a fresh contrast to the faculty perspective.

Areas	Description	Related works
Teaching Effectiveness	Explore approaches that can enhance teaching effectiveness and extend learning beyond the classroom, adopting various pedagogies and strategies. These can include integrating real-world projects into the curriculum, fostering collaboration among students, and using methods such as blended learning and project-based learning. By incorporating hands-on experiences, adaptive technologies, and practical applications, educators can better prepare students for future courses and the workplace, ensuring that learning extends beyond traditional boundaries.	Teaching software development for real-world problems using a microservice-based collaborative problem-solving approach, by LAU, Yi Meng; KOH, Christian Michael; JIANG, Lingxiao. (2024.0). ICSE-SEET 2024: Proceedings of the IEEE/ACM 46th International Conference on Software Engineering: Software Engineering Education and Training: Lisbon, April 14-20
Curriculum Relevance	To explore avenues for course curriculum to stay aligned with industry standards. Coupled with industry and technological tools, students could better appreciate the relevance of course curriculum with the industry which will prepare them effectively for their future careers.	Gamified online industry learning platform for teaching foundational computing skills, by LAU, Yi Meng; BARROS, Rafael J.; GOTTIPATI, Swapna; SHIM, Kyong Jin. (2022.0). 2022 IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE): Hong Kong, China, December 4-7: Proceedings, (pp. 112-119) Piscataway, NJ: IEEE

Web3 Digital Assets

The rise of blockchain technology has shaped the increased adoption of Web3 which has revolutionized the fundamental principles of decentralization, trust, transparency, and immutability in e-businesses and applications. This advancement has led to the evolution of assets, which were once managed through physical or digital formats with centralized control and platform-specific constraints. Today, digital assets, including digital identities for individuals and organizations, represent a compelling area of exploration.

The changes in the financial landscape and related news impact not only financial institutions but also other industries, often generating ideas for new areas to explore. In today's environment, where the rise of cryptocurrencies and the decentralized nature of Web3 are disrupting traditional Web2 practices, the effects vary across different countries.

Areas	Description	Related works
Digital assets	Blockchain-based assets, such as domain name services and NFTs, operate within a distinct marketplace compared to their Web2 counterparts. In the Web3 environment, these digital assets can serve as key interfaces for various transactions, including financial ones, which are not feasible in Web2. They can effectively function as virtual wallets or storefronts in the digital realm. Individuals capitalize on the decentralized nature of these digital assets to generate profits. Understanding these dynamics can offer valuable insights into these digital assets' emerging concepts of digital identity.	- Exploring the market impact of Web3 identity imitation in Ethereum Name Service, by KE, Ping Fan; LAU, Yi Meng. (2024.0). PACIS 2024 Proceedings, Ho Chi Minh, Vietnam, July 1-5, (pp. 1-9) Ho Chi Minh, Vietnam: AIS. (Published) - Usability versus collectibility in NFT: The case of Web3 domain names, by KE, Ping Fan; LAU, Yi Meng. (2024.0). Proceedings of the 17th China Summer Workshop on Information Management, CSWIM 2024, Xiamen, China, June 29-30, (pp. 1-6) Xiamen, China: (Published) - Is Web3 better than Web2 for investors? Evidence from domain name auctions, by KE, Ping Fan; LAU, Yi Meng; HANLEY, Daniel Varghese. (2023.0). Pacific Asia Conference on Information Systems 2023, Nanchang, China: AIS. (Published)