

EDUCATION

University of Maryland, Baltimore County Ph.D. Information Systems	Baltimore, MD exp. 2026
– Research Focus: Federated Learning using Blockchain (Swarm Learning)	
– Advisor: Dr. Sanjay Purushotham	
Johns Hopkins University M.S. Computer Science	Baltimore, MD 2017
Towson University B.S. Computer Science	Towson, MD 2015

UNIVERSITY TEACHING EXPERIENCE

- **Lecturer**, Towson University Fall 2017 - Current
Department of Computer and Information Systems
- **Adjunct Faculty**, Johns Hopkins University Fall 2019 - Current
Johns Hopkins Carey Business School

UNIVERSITY RESEARCH EXPERIENCE

- **Graduate Research Assistant**, University of Maryland, Baltimore County Current
My research is focused on federated learning utilizing public L1 blockchains.
- **Research Assistant**, University of Maryland, College Park Fall 2020 - Summer 2021
My research was focused on analyzing Intimate Partner Violence (IPV) during the COVID-19 pandemic. Using Machine Learning and Natural Language Processing, we were able to build a language model to classify violence self-disclosures on social media.
- **Undergraduate Research Assistant**, Towson University Fall 2013 - Spring 2015
As part of Dr. Sandro Fouché's research group, I worked on an intercollegiate team alongside the University of Maryland, College Park researching mobile teaching technologies. My contributions included developing and coding several Java Servlets to handle intelligent parsing and dispatching of user transactions to the mobile application front-end.

PUBLICATIONS

- [1] **J. Irani**, K. Nisson, Y. Cole, S. Fouché, and A. Porter, "Mobile Teacher - A Platform for Interactive Education Beyond the Classroom", in *2014 Consortium for Computing Sciences in Colleges Eastern Conference*, Nov. 2014.

PROFESSIONAL EXPERIENCE

- Flave** Baltimore, MD
Founder & CEO Jan 2020-Current
- Flave is the top rewards platform for local restaurants in Baltimore.
 - * **Featured:** Company to Watch (2023), Top 20 Startup of 2022, WBAL, BBJ, Technical.ly
- SchoolDuels** Baltimore, MD
Head of Product Nov 2018-Jan 2020
- Led engineering and product teams in development, growth, and expansion from ideation to \$125k in ARR. Successfully secured \$1MM in seed round funding within first year of incorporation.
- TrackOFF (Acquired by Avast)** Baltimore, MD
Lead iOS Developer Nov 2017-Nov 2018
- Supported and worked on all phases of software project delivery, including initial client engagement and requirements gathering, user centered design, agile development practice, CI/CD, hand-off and knowledge transfer to the client, and post-production support and trouble-shooting.
- ZeroFOX** Baltimore, MD
Full-Stack Developer Jan 2016-Nov 2017
- Created asynchronous rules using JavaScript to alert the ZeroFOX platform on threatening/suspicious activity using social media APIs. Designed and taught a two-day JavaScript-based Security Engineer training curriculum for non-technical customers.
- Mindgrub** Baltimore, MD
iOS Developer Intern Sept 2015-Dec 2015
- Wrote automated UI tests using Calabash to ensure new features and version updates did not affect any use cases of the Polk Audio Omni Utility application.
- Primary Data** Los Altos, CA
iOS Developer Intern May 2015-Aug 2015
- Developed a proprietary iOS application to visually define memory management options for a software-defined storage system. The resulting application was presented at VMworld 2015 in SF, California.
- Towson University** Towson, MD
iOS Developer Intern Aug 2014-May 2015
- Maintained and redeployed the Wavyleaf application to allow users to plot, photograph, and detail their sightings of the invasive plant species.
- Textron Systems** Hunt Valley, MD
Software Engineering Intern May 2014-Aug 2014
- Modified testing tools to simulate the embedded C++ airborne software system to support multiple payload configurations.
- Vane Brothers** Baltimore, MD
Software Engineering Intern May 2013-Aug 2013
- Wrote a proprietary C# application that tracks the location, speed, direction, weather, fuel, payload, and crew information for the entire 120 vessel fleet.

COURSES TAUGHT

- **BU 520.710: Big Data Machine Learning** Johns Hopkins University
Spring 2023, Fall 2021, Spring 2023
- **BU 232.770: Cryptos & Blockchain** Johns Hopkins University
Fall 2019 - Current
- **COSC 670: Cryptocurrencies & Blockchain** Towson University
Spring 2022 - Current
- **COSC 617: Advanced Web Development** Towson University
Fall 2017 - Current
- **AIT 618: Client/Server Programming** Towson University
Fall 2017 - Current
- **AIT 616: Fundamentals of Web Programming** Towson University
Spring 2018 - Current
- **COSC 484: Web Programming** Towson University
Fall 2017 - Current
- **COSC 431: Cryptocurrencies & Blockchain** Towson University
Fall 2022 - Current

SKILLS

- **Programming Languages (Advanced):** JavaScript/ES6+, Swift 5.0+
- **Programming Languages (Intermediate):** Solidity, Python, Java
- **Programming Languages (Basic):** Rust
- **Related Technology:**
 - **iOS Development(Advanced):** SwiftUI & UIKit
 - **Full-Stack Web Development(Intermediate):** React.js, Node.js, Express.js
 - **Web3(Basic):** IPFS, Alchemy, Candy Machine
 - **ML/NLP(Basic):** NumPy, NLTK, scikit-learn

PROJECTS

See full list of projects on github.com/jalirani

- **Fourplay** (SwiftUI, 2023)
Featured: CNBC, NYPost
- **SmartAddress** (Swift, 2018) *Sold: October 2018*
Address book that compares Uber & Lyft rates
- **SleepIn** (Swift, 2019)
Featured: WBAL, DiamondBack
- **Corrie** (Swift, 2016)
Featured: WWDC 2021

AWARDS

- Towson University Outstanding Lecturer Award 2023
- Top 21 Most Influential Engineers in Baltimore in 2021 2021

- USM COVID App Challenge Winner 2020
- Mary Hudson Scarborough Award 2015

EXTRACURRICULAR ACTIVITIES

- TapIn 2023–Current
Advisory Board Member
- SignalTuner 2023–Current
Advisory Board Member
- inso 2023–Current
Advisory Board Member
- eTU Council 2020–Current
Entrepreneurship Faculty Fellow
- StarTUp Accelerator 2020–Current
Faculty Advisor
- CountySportsZone 2018–Current
Advisory Board Member