

EDUCATION

University of Maryland, Baltimore County

Ph.D. Information Systems

Baltimore, MD

exp. 2024

- Research Focus: Federated Learning with Natural Language Processing
- 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 natural language processing and natural language generation within text conversations. I have also researched speech transcripts from prominent political figures.
- **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

Founder

Baltimore, MD

Jan 2020-Current

- Flave is bringing web3 to the restaurant industry.
 - * **Featured:** Top 20 Startup of 2022, WBAL, BBJ, Technical.ly

SchoolDuels

Head of Product

Baltimore, MD

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)

Lead iOS Developer

Baltimore, MD

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

Full-Stack Developer

Baltimore, MD

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

iOS Developer Intern

Baltimore, MD

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

iOS Developer Intern

Los Altos, CA

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

iOS Developer Intern

Towson, MD

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

Software Engineering Intern

Hunt Valley, MD

May 2014-Aug 2014

- Modified testing tools to simulate the embedded C++ airborne software system to support multiple payload configurations.

Vane Brothers

Software Engineering Intern

Baltimore, MD

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

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

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

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|---|---|
| • Darla (SwiftUI, Current) Generates text conversation responses | • SleepIn (Swift, 2019) Cancels alarm if school is closed |
| • SmartAddress (Swift, 2018) <i>Sold: October 2018</i> Address book that compares Uber & Lyft rates | • Corrie (Swift, 2016) Featured: WWDC 2021 |

AWARDS

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| • Top 21 Most Influential Engineers in Baltimore in 2021 | 2021 |
| • USM COVID App Challenge Winner | 2020 |
| • Mary Hudson Scarborough Award | 2015 |

EXTRACURRICULAR ACTIVITIES

- StarTUp Accelerator 2020–Current
Faculty Advisor
- SearchHubs 2020–Current
Advisory Board Member
- CountySportsZone 2018–Current
Advisory Board Member