Jal Irani

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Education

University of Maryland, Baltimore County — Baltimore, MD
Ph.D. Information Systems — exp. 2024

- Research Focus: Federated Learning with Natural Language Processing
- Advisor: Dr. Sanjay Purushotham

Johns Hopkins University — Baltimore, MD
M.S. Computer Science — 2017

Towson University — Towson, MD
B.S. Computer Science — 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 Baltimore, MD
Founder Jan 2020-Current

– Flave is bringing web3 to the restaurant industry.
  * **Featured**: 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
- **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)
  Cancels alarm if school is closed
- **Corrie** (Swift, 2016)
  Featured: WWDC 2021

Awards

- Top 21 Most Influential Engineers in Baltimore in 2021 — 2021
- USM COVID App Challenge Winner — 2020

- Mary Hudson Scarborough Award   2015

Extracurricular Activities

- 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