

Objective

Seeking an opportunity that partakes in the development of solutions to problems using technology: Web Development, Full-Stack Development, and/or Machine Learning.

Relevant Education

University of Illinois in Urbana-Champaign, IL
Ph.D. in Information Sciences

Current (on one year break)

Indiana University in Bloomington, IN
Master of Science in Computer Science, GPA: 3.84/4.00

May 2018

Purdue University in West Lafayette, IN
Bachelor of Science in Mathematics, GPA: 3.20/4.00
Minors in Statistics, Sociology, and Management

May 2014

Web/Full-Stack Development Experience

Fakey: A social media news literacy game

Fall 2017 - Current

- Lead developer and creator of Fakey ([Web](#), [Android](#), [iOS](#))
- Created Fakey using Vue.js, Django, MySQL, and Apache Cordova
- Took part in the research and ideation process for Fakey using fake-news and social computing findings and scientific publications
- Iterated and improved Fakey features by surveying stakeholders and presenting the project at various meetings and conferences
- Currently still supporting Fakey by improving features from user feedback, and fixing bugs
- Took part in various interviews and speaking events including with Poynter and EU DisinfoLab

Schedule Buddy: A well being and social impact scheduling system

Spring 2019 - Current

- Co-created the back-end in Django/PostgreSQL and fully created the front-end in Vue.js and Apache Cordova
- Currently managing and leading a small team towards improving, expanding, and launching the product

4castersports: Commission-free sports betting ([website](#))

Spring 2019 - Current

- Dev lead and freelancer of a small team in a start-up environment using agile development and sprints
- Building Node.js/MongoDB micro-services to integrate decentralized betting using the block-chain
- Taking part in the DevOps life-cycle of the product using the Google Cloud Platform, Mongo Atlas, CI/CD through GitLab, organization via Trello, and documentation via Notion

Code for America: Young Government Leaders (YGL) Website Project

Fall 2018 - Spring 2019

- Created a LAMP [website](#) with Docker to support YGL which is a nonprofit providing a space for young government leaders in Chicago to make a difference

Hoaxy: Social media news/fake-news chatter analysis/visualization tool

Spring 2017 - Spring 2018

- Created [Hoaxy](#) news board and search functionality on the landing page using Python APIs and CRON jobs to automate recent news scraping to the site
- Took part in D3.js/Sigma.js optimizations in order to enable the visualization to render quicker
- Innovated new features and discussed bugs in weekly meetings to expedite the development process
- Created various features such as tooltips, animation timelines, and bot cache system using Bootstrap, JavaScript, HTML5, CSS3, and Sigma.js, and D3.js

ECHO Global Logistics: Job board creation

Spring 2016

- Created a [job board](#) for ECHO Global Logistics using JavaScript and REST APIs

FHLBC Website: Proprietary banking application

Summer 2014 - Fall 2015

- Created and maintained the FHLBC [website](#) and its processes using C#, SQL Server, and Octopus Deploy
- Took part in fixing loan processing bugs, UI bugs, and creating triggers/stored procedures to extend bank processing functionality

Industry Experience

Avanade Consulting: Chicago, IL

2014 - 2016

- Took part in full application life-cycle (Requirements gathering, Application Development, Test Development Change, Deployment of Change, Support previous Deployments) as part of the Production Support team
 - Learned an array of Microsoft technologies applicable to back-end data storage and data manipulation (SQL Server), middleware logic for large-scale Mortgage Banking applications (C#, PowerShell, Automation), front-end UI experience (HTML, JavaScript, CSS), as well as version control using Visual Studio Team Foundation Server
 - Presented various technologies and projects to business users, communicated closely with clients, and assisted in "Live" Production critical failures bi-monthly
 - Acquired a general idea of the full-stack development toolkit: Web Design, Application Design, UI/UX, Testing, Version Control, Analytics, Big Data, Reporting, Machine Learning, Data Mining, and Cloud
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Leadership Experience

Dev lead at 4castersports: A commission-free sports betting startup

Spring 2019 - Current

Project Lead for Schedule Buddy: A well being and social impact scheduling system

Spring 2019 - Current

Indiana University: As a student/researcher in Bloomington, IN

Fall 2016 - Spring 2018

- Assisted undergraduates and fellow researchers with various problems regarding system/software configurations, problem formulations, research methods, and programming tips
- Coordinated and led/co-led meetings with regards to research projects or class projects

Avande Consulting: As a senior solutions developer in Chicago, IL

2014 - 2016

- Led and co-led meetings regarding production support tasks essentially co-ordinating and assigning tasks to offshore team members
- Briefly mentored incoming analysts with system/software configurations and programming tips

EPICS: (Engineering Projects in Community Service) at Purdue University, West Lafayette, IN

2010 - 2013

- Presented product prototype to stakeholders and collaborators, taking part in the decision-making process
 - Coordinated meetings to discuss progress, issues, and goals. Constructed decision matrices, tested prototypes, and delivered the final project to the client
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Research Experience

University of Illinois: Urbana-Champaign, IL

Summer 2018 - Summer 2019

- Published "[Adversarial perturbations to manipulate the perception of power and influence in networks](#)" in (ASONAM 2019)
- Developed methodology and applied experimentation with Adversarial Learning on Social Networks
- Created a Python framework to enable simulations on any networks using any desired graphs, node positions, budgets, functions, and evaluation metrics/goals
- Mining for patterns in how people interact with misinformation on social media feeds using **Fakey**
- Assisted with writing grants and submitting preliminary work to conferences
- Crafted a rough draft of a publication for our work on patterns in how people interact with misinformation on social media feeds using Fakey
- Crafted a rough draft of a publication for our work on Adversarial Learning in Graphs

- Presented poster titled “Towards an open-source framework to assess the robustness of network structures and metrics to adversarial attacks and ascertain adversarial attack patterns” at the iSchool Corporate Showcase 2019 in Champaign, IL
- Presented poster titled “Adversarial perturbations for identifying strategies toward biasing the perceptions of power and influence in social networks” at the iSchool Research Showcase 2018 in Champaign, IL

Indiana University: Bloomington, IN

Fall 2016 - Summer 2018

- Completed my Master’s Thesis funded by the [Democracy Fund](#) which involves the study and prevention of misinformation in social media by creating, using, and improving tools such as [Hoaxy](#), [OSoMe](#), [Botometer](#), and a media literacy game called [Fakey](#).
- Published [“HarpLDA+: Optimizing Latent Dirichlet Allocation for Parallel Efficiency”](#) (IEEE Big Data 2017) and [“Finding and counting tree-like subgraphs using MapReduce”](#) (IEEE TMSCS 2017) under professor Judy Qiu in the summer of 2017
- Created a Machine Learning MOOC under Professor Ying Ding for the IU [Data Science On-Ramp Program](#) in the summer of 2017
- Fact Checking: Awarded 5th place in the 2017 WSDM Cup and published the paper [“RelSifter: Scoring Triples from Type-like Relations”](#)
- Assisted in research discussions, manual data annotation, and building algorithm comparison as well as feature extraction tools using Python
- Presented relevant research to peers and collaborators
- Served as a Web Administrator for the IU Complex Networks and Systems WordPress [website](#)

University of Michigan: Ann Arbor, Michigan

Summer 2013

- Learned and implemented the Radiative Transport Equation (RTE) in three dimensions
- Created a Java [applet](#) to extrapolate the intensity of light in random media using the RTE
- Wrote a report in LaTeX explaining the RTE theory and how to use the java applet

Discovery Park Undergraduate Research Internship Program:
Purdue University, West Lafayette, IN

Spring 2013

- Analyzed journal articles, cleaned and mined data using Python, and ran analysis in R to discern our research results – i.e. Civilians killed due to IDEs
- Published a Journal Article: [“Civilian Deaths and the Iraq War: Who is Responsible?”](#) in the Journal of Purdue Undergraduate Research

Teaching Experience

University of Illinois: As a Ph.D. student in Champaign, IL

Summer 2018

- Served as a TA for a Network Analysis class for the 2018 Global Institute teaching program

Volunteer Experience

Code for America, Pro-Truth Pledge and Movement, Zooniverse, Outreach for NetSci 2017 conference, Aspire Foundation, Misericordia Heart of Mercy, Greater Chicago Food Repository, Habitat for Humanity, Run For Cause

Relevant Skills

JavaScript: ★★★★★
HTML5: ★★★★★
CSS3: ★★★★★
WordPress: ★★★★★
Bootstrap: ★★★★★
React: ★★★★★
Vue.js: ★★★★★

Git: ★★★★★
Python: ★★★★★
SQL: ★★★★★
MongoDB: ★★★★★
Linux OS/Linux Bash: ★★★★★
PHP: ★★★★★
Django: ★★★★★

- Node.js:
- AWS:
- npm:
- Data Mining:
- LaTeX:
- Deep Learning:
- Cloud/Distributed Computing:
- C/C++:
- Java:
- Google Cloud Platform: