Pradyumna Shome

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Education

University of Illinois at Urbana-Champaign	**Champaign-Urbana, IL, USA**
B.S. Computer Science, James Scholar, Dean's List	*August 2017–May 2021*
National Public School, HSR Layout	**Bangalore, KA, India**
High School Diploma, Science with Computer Science	*June 2013–May 2017*

Experience

Research

Blender Lab, NLP Research at Illinois	**Champaign-Urbana, IL, USA**
Research Assistant	*August 2019–Present*

- Advisor: Prof. Heng Ji
- Generating event schema from multimedia multilingual representations using graph neural nets

FPSG, Security and Privacy Research at Illinois	**Champaign-Urbana, IL, USA**
Research Assistant	*August 2019–Present*

- Advisor: Prof. Chris Fletcher
- Identifying security vulnerabilities in the training of deep neural networks (DNNs).
- Investigating the effects of dynamic overclocking and cache compression on memory access times

Professional

Salesforce	**San Francisco, CA, USA**
*Software Engineering Intern, Records Experience	Platform Cloud*	*June 2019–August 2019*

- Created web app to automatically suggest test plans for a new user story, through natural language processing of the acceptance criteria, using JavaScript (ES2017), Apex, SOQL, Web Components, and Jest for unit tests
- Reduced 13 engineering work days spent manually compiling test plans per sprint planning session
- Developed UI for Einstein Modeling's first Business Card Scanner, that uses OCR and Named Entity Recognition to automate the organization of business contact information.
- Ideated and built intern-matching social app using Python and Jinja, that helps bolster personal connections and surfaces common interests.

Virtusa	**New York, NY, USA**
Software Engineering Intern	*July 2018–August 2018*
Media & Content Division	

- Created serverless cloud app and supporting data lake to model, process, and aggregate computer vision data for predictive analytics, using Python, AWS Lambda, Amazon API Gateway, and Amazon DynamoDB
- Implemented reference business intelligence (BI) tool, using NLP generative models (LDA, NTM) to gain insights on social media reactions to popular films and TV shows, using Boto 3, Amazon QuickSight, and Amazon SageMaker

HackIllinois	**Champaign-Urbana, IL, USA**
Systems Developer	*April 2018–February 2019*

- Developed Go microservices to enable user authentication, authorization, event registration, and notifications via mobile app clients, including CI / CD pipeline (Travis, AWS CodePipeline, Amazon ECS).
- Added features such as user mocking, OAuth single sign-on, multi-tier decision review, templated mail, error handling and CRUD (with MongoDB).
- Created QR code scanner in Android app to manage event check-in and track participant statistics for meals and mini-events.

Reflections | Projections   **Champaign-Urbana, IL, USA**
Lead Web Developer   *January 2018–September 2018*
- Principal full-stack developer of website written in ES6 using React, Webpack, and Nginx.
- Integrated microservices-based in-house registration API that brought in 2200+ applicants.
- Mentored junior developers through code review and pair programming.

Teaching

UIUC Department of Computer Science   **Champaign-Urbana, IL, USA**
Lead Course Assistant, CS 241: System Programming   *January 2019–Present*
- Lead a lab section, conduct office hours, and develop assignments teaching concepts of Linux system programming
- Contribute content to and maintain course textbook and website, and conduct technical and behavioral interviews for prospective course staff members
- Manage course logistics, onboard and mentor new staff, and answer student questions on online Q&A platform

UIUC Department of Computer Science   **Champaign-Urbana, IL, USA**
Course Assistant, CS 233: Computer Architecture   *August 2018–December 2018*
- Hold a discussion section, and conduct office hours to help students learn concepts about computer architecture such as caches, instruction set architectures, (MIPS) assembly programming, instruction-level parallelism, vectorization etc.

Awards and Distinctions

- **2019**
  - Illinois Engineering Achievement Scholarship
  - Forbes Under 30 Scholar
- **2018**
  - Illinois Engineering Achievement Scholarship
- **2017**
  - AP Scholar with Distinction

Languages

English: Full professional proficiency

Hindi: Native or bilingual proficiency

French: Elementary proficiency

Technical skills

Programming Languages: Python, C, Java, Go, C++, Kotlin, HTML, CSS, JavaScript

Tools + Frameworks: Cloud (AWS, Firebase, Travis, Serverless, Docker); Databases (MongoDB, MySQL); Web (React, Node.js, Web Components); Version Control (Git, SVN)

Organizations

- Asian American Association (AAA) at UIUC
- Association for Computing Machinery (ACM) at UIUC
- Women in Computer Science (WCS) at UIUC

Hobbies & Interests

Table-tennis, board games, piano performance
Last updated: October 13th, 2019