

# Harsh Poddar

SOFTWARE ENGINEER

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## Education

### University of Massachusetts Amherst

Amherst, MA

B.S. IN COMPUTER SCIENCE | GPA 4.0

Sep. 2015 - Dec. 2017

- Commonwealth Honors College, Departmental Honors.
- Course Citation in a graduate class CS 631 (Programming Languages) for highest rank.
- Course Citation for 4 undergraduate classes for being amongst the top students in class.

## Industry Experience

### 101edu, Inc.

Remote Work

BACKEND DEVELOPER

Aug. 2016 - Jan. 2017, Sep. 2017 - Dec. 2017

- Implemented RESTful API server for Chem101 mobile applications and web application using Spring framework (DI, Boot, Data, Security, Web).
- Built and deployed overall service infrastructure utilizing several AWS stack (including EC2, S3, CloudFront, Route 53, CodePipeline, CodeBuild, and IAM), focusing on high-availability, fault tolerance, and auto-scaling.
- Integrated external services such as Stripe payment processing and AWS SNS push notifications.

### Facebook, Inc.

Menlo Park, CA

SOFTWARE ENGINEER INTERN

May 2017 - Sep. 2017

- Worked on development of Facebook's internal version of Apache Hive and focused on performance.
- Identified scope for improvement in core join logic of Hive and redesigned it and the components around it. When tested with join queries, observed ~14% overall performance improvement.
- Produced readable code and provided a cleaner and strictly typed abstraction while still reducing query times.
- Identified and fixed multiple long-lived correctness bugs.
- Collected statistics to better understand the nature of the queries and shared findings with team to help guide future projects.

### Microsoft Corp.

Seattle, WA

SOFTWARE ENGINEERING INTERN

May 2016 - Aug. 2016

- Added framework functionality to help customers customize their user interface without needing to modifying code.
- Identified a development issue and created a Chrome extension to reduce development time for the Microsoft Dynamics CRM team.
- Acquired an understanding about development of scalable enterprise application and good practices to reduce maintenance costs.

### ezDI, Inc.

Ahmedabad, India

RESEARCH ENGINEER

Apr. 2015 - Aug. 2015

- Lead a team of 3 interns (undergraduate and PhD) and a full time engineer to develop an information retrieval system called Codebook.
- Codebook is currently used by hospitals in US to lookup medical codes by entering medical terms, synonyms and multiple user customizable abbreviations.
- Designed the system architecture, RESTful web services, and security module.

## Technical Skills

- Proficient with Java and Spring framework.
- Experience with Python, Scala, OCaml, Bash, C, C#, JavaScript, React, NodeJS,  $\text{\LaTeX}$ .
- Worked with MongoDB, MySQL, Redis, Apache Hive, Apache Lucene, Amazon Web Services, Stripe, Facebook Graph API.

## Academic Experience

### PLASMA

Amherst, MA

UNDERGRADUATE RESEARCHER

Jan. 2017 - Dec. 2017

- Designed a port-less network programming language called Portless NetKAT that enables network programmers to write policies in terms of packet locations instead of switches and unintuitive list of ports.
- Reduced the input domain for increased readability while still allowing the same level of control over packets.
- Developed a compiler for converting programs in Portless NetKAT to NetKAT, a language with ports.

- Taught in discussion sections and held office hours to guide students through the course.
- Redesigned components of the course and helped design homework projects for students.

## Awards & Certifications

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### AWARDS

2017	<b>1<sup>st</sup> Place</b> , Team Project for CS 326: Web Programming	Amherst, MA
2015	<b>2<sup>nd</sup> Place Overall</b> , 1 <sup>st</sup> Place AWS, and 1 <sup>st</sup> Place Groupon at HackHolyoke	Holyoke, MA
2014	<b>1<sup>st</sup> Place in India</b> , Top Academic Rank – Cambridge International A & AS Level Computing	Ahmedabad, India
2013	<b>1<sup>st</sup> Place</b> , TiE Techies2Tycoon as founder of Phostcard	Ahmedabad, India

### CERTIFICATIONS

2012	<b>Oracle Certified Professional</b> , Java SE 6 Programmer	Ahmedabad, India
2012	<b>Oracle Certified Professional</b> , Java EE 5 Web Component Developer	Ahmedabad, India

## Projects

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### Spire Course Checker

Amherst, MA

DEVELOPER

Jun. 2017

- Noticed an issue with the lack of waitlist for course registration at UMass Amherst.
- Created a course checker in Python that used Selenium to check for open courses periodically and to notify a student about it.

### Nectarime

Amherst, MA

TEAM LEADER AND DEVELOPER

May 2017

- Lead a team for CS 326 Web Programming Project to enable sharing of files from mobile to public computer through QR scan.
- Created the base framework using NodeJS and React, and integrated services such as Dropbox and Google Drive.
- Used web sockets and peer to peer communication along with SSL to allow secure, rapid file sharing.

### L<sup>A</sup>T<sub>E</sub>X Bot for Slack

Amherst, MA

DEVELOPER

Nov. 2016

- Identified problems with sharing of problems involving special symbol over Slack group and limitations of existing solutions.
- Created a Slack Bot written in NodeJS that replied with images produced from L<sup>A</sup>T<sub>E</sub>X code sent with the ability to update code.

### Contextr

Amherst, MA

DEVELOPER

Oct. 2015

- Developed a context-aware text suggestion engine that suggested text based on the document context and related documents.
- Used data scrapped from web pages online to create contextual Markov chains and used them to rank next word suggestions.

### Dynapodd

Ahmedabad, India

DEVELOPER

Jan. 2015

- Dynapodd is an example based query and update system as an extension for Hibernate ORM and Spring Data MongoDB.
- Created using Java Reflection API to ease the development of backend for my startup, Phostcard.

### GoPapers.net

Ahmedabad, India

FOUNDER AND DEVELOPER

Apr. 2014

- Application to allow quick access to past papers for Cambridge International Examinations.
- 40,000 users from 140 countries have used this web application.

### Home Automation System

Ahmedabad, India

CREATOR

Feb. 2014

- Worked on several automation projects using Arduino and microcontrollers, along with a variety of sensors and components.
- Designed a Bluetooth IR relay device that would allow TV and AC control from phone.
- Created an app to dim the lights in the house, and control the fan speed over WiFi.