Chinmay **Garg**

Santa Barbara, CA

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Education

UC Santa Barbara	*Santa Barbara, CA*
M.S. IN COMPUTER SCIENCE	*Sep. 2018 - Jun. 2020*

Pennsylvania State University	*University Park, PA*
B.S. IN COMPUTER SCIENCE	*Jun. 2012 - May. 2016*

Experience

Facebook — *Melno Park, CA*
SOFTWARE ENGINEERING INTERN — *June. 2019 - Sept. 2019*
- Feed & Stories - Core Infrastructure

UC Santa Barbara — *Santa Barbara, CA*
TEACHING ASSISTANT — *Jan. 2019 - Mar. 2020*
- CS 154: Computer Architecture
- CS 170: Operating Systems

SAP SE — *Newtown Square, PA*
SOFTWARE/SUPPORT ENGINEER — *Aug. 2016 - Aug. 2018*
- Wrote a web-application for reporting requirements for productivity monitoring using Node.js and backend MySQL Database
- Deployed the app on AWS along with retrofitting it for data extractions using PHP and added authorization roles
- Wrote C++ bug fixes/enhancements for HANA Studio and custom code management module
- Assisted very large scale clients develop migration plans for SAP systems, DB's & OS
- Wrote test cases for performance testing

Penn State University, Computer Science and Engineering — *University Park, PA*
LEARNING ASSISTANT — *Aug. 2014 - May. 2016*
- Taught programming in C++ to aspiring CSE majors
- Helped conduct office hours and teach data structures
- Conducted one-one sessions for debugging issues and setting up project ideas
- Drafted and graded in-lab assignments and term projects along with exams

Projects

Meme Browser
HIGHLY SCALABLE RUBY-ON-RAILS APPLICATION
- Wrote a reddit-like application for sharing meme's
- Implemented features such as account management, authorizations, like/dislikes, commenting etc.
- Worked in a group of five - splitting scrum methodology using GitHub Projects
- Load tested using Tsung on AWS Elastic Beanstalk for more than 8K active concurrent users

FUSE Filesystem
SIGSEGV - UNIX FILE SYSTEM
- Wrote a file system for Unix systems
- Implemented high-level function calls using the FUSE API
- Worked in a group of four - splitting tasks with weekly meetings and collaboration on Github

Multitron Device Driver

JUMBOTRON DISPLAY DEVICE

- Wrote the driver from scratch in C to interface with a virtual device
- Implemented device functionality such as on/off and read/write on screen with auto scaling for multiple connected displays in a grid
- Deployed network functionality to send/receive packets using TCP/IP sockets for remote device control
- Implemented API to pass instructions to the device

Map Reduce

LIGHT IMPLEMENTATION OF MAP-REDUCE IN C ON UNIX

- Implemented a version of MapReduce from scratch to count recurring words
- Used concurrency principles for producer consumer model using POSIX threads
- Wrote muliple test cases with vert large and small scale data with edge cases
- Implemented data splitting while making sure it maintains a complete word by bit shifting

Team Productivity at SAP

ANALYTICS DASHBOARD WITH RESOURCE CALCULATION

- Wrote a web app using JavaScript and HTML5 while using open-source libraries such as Chart.js
- Implemented back-end calculation based on SAP requirements for internal monitoring
- Fetched data using Python from a MySQL server hosted on Apache
- Migrated the system to AWS and implemented authorizations to provide specific roles such as manager, employee etc.

Honors & Awards

2016	**3rd Place**, Code PSU 2016	*University Park, PA*
2016	**Awarded**, Dean's List for exceptional performance	*University Park, PA*
2011	**Finalist**, TCS IT Whiz	*Ahmedabad, India*
2008	**Awarded**, Indian Scouts & Guides – Governor Award	*Gandhinagar, India*

Organizations

2012	**Member**, Association for Computing Machinery	*University Park, PA*
2013	**Member**, Indian Culture & Language Club	*University Park, PA*
2015	**Guest Lecturer**, Association of Women in Computing	*University Park, PA*
2015	**Administrator**, Penn State Computer Science Group	*University Park, PA*

Other Activities

Bitcamp
U. Maryland

VOLUNTEER & PARTICIPANT
2016

- Helped co-ordinate activities for over 2000 students from multiple schools
- Participated and built a social network density map with team members

HackPSU
University Park, PA

PARTICIPANT
2014 & 2015

- Attended panels to learn about new technologies
- Participated with team members and worked on personal projects

Courses

Computer Science

RELEVANT COURSES

- Algorithms & Data Structures, Discrete Mathematics, Theoretical Computation
- Advanced Operating Systems, Systems Programming, Concurrent Programming, Computer Network & Security
- Computer Vision, Functional Programming, Database Systems, Programming Language Concepts
- Highly Scalable Web Systems, Runtime Systems