Prem Chintalapudi

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Education:

Massachusetts Institute of Technology (4.9/5 GPA) . . . . Cambridge, MA (May 2022)

- **Computer Science & Engineering + Bioengineering BS**
- **Relevant coursework**:

Algorithms/Data Structures	Computer Architecture	Software Design and Engineering
Introduction to Machine Learning	Probability & Random Variables	Intro to Embedded Systems
Performance Engineering (upcoming)	Computational Systems Biology (upcoming)	Design and Analysis of Algorithms (upcoming)

Work Experience:

McAfee, LLC Santa Clara, CA (Remote); May 2020 – August 2020

Software Engineering Cloud Intern Cloud Security BU Engineering

- Connected Apps Security Controls
  - Added controls to endpoints to prevent unauthorized access to resources using Spring Security
  - Implemented new REST endpoints to fetch data from database before aggregating and normalizing data over time to display as a chart
  - Developed automation test suite for UI components using Cypress to test application loading, access control, and application base load time

MIT EECS Department Cambridge, MA; September 2019 – May 2020

Lab Assistant

- Help students in Fundamentals of Programming understand their programming assignments
- Assist in debugging students' code and instruct them in debugging principles

Sandia National Laboratories (CA) Livermore, CA; June 2019 – August 2019

Undergraduate Summer Intern R&D

- Investigated antibacterial properties of mesenchymal stromal cells using CRISPRa/i
- Performed bacterial work (cloning, mini/maxipreps), cell lines + bacterial co-culture assays

Koch Institute for Integrative Cancer Research Cambridge, MA; March 2019 – June 2019

Undergraduate Researcher Gertler Lab

- Sectioned rat tumors and stained them to observe low pH regions of tumors
- Performed co-IP experiments to isolate binding partners for MENA protein in breast cancer cell lines

Personal Projects

Mini Virtual Machine *C++* (June 2020 - present)

- Bytecode interpreter modeled similarly to the JVM, written in C++
- Garbage collection, virtual memory allocation/deallocation, template metaprogramming
- Associated bytecode compiler written in C++ (tokenizing, parsing, compiling)

Course Planning Application *Vue/Typescript* (December 2019 – January 2020)

- Graphical and responsive planning of courses using web technologies; intuitive user interface
- Rendering pipeline optimization, CSS animation/transitions

Molecule Drawer *Vue/Typescript* (March 2019 - August 2019)

- Drawing high quality organic chemistry molecules using SVG, state machine, MVVM design pattern

Skills:

- Computer Languages: Python, Java, C++, Typescript, Javascript, SQL, HTML, CSS, SVG