

# CHIRAG TOPRANI

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**EDUCATION** UC SAN DIEGO 2015 - 2019 B.S. / Major: Computer Science GPA 3.9 / Minor: Economics

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## EXPERIENCE

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**FACEBOOK / Incoming Software Engineering Intern /** 6/18-9/18

**FACEBOOK / Software Engineering Intern** (Audio 360) / *C, C++, Python, JS, libuv* 6/17-9/17

- Developed end to end audio plugin framework using a rich stack: a custom lightweight C++ server interfacing a React UI.
- Created extensible API to simplify the creation of new audio plugins.
- Worked on making data encoding more efficient using a custom networking protocol.
- Added multithreading functionality to support concurrent clients for the same instance.
- Created custom processing scripts with Python.

**CISCO / Software Engineering Intern** (Cisco UCS) / *JS* 6/16-9/16

- Worked on Cisco's UCS Director product that delivers Infrastructure as a Service (IaaS) management software for data centers. Helped optimize the existing codebase by simplifying code and fixing bugs.
- Used JS to develop over 30 distinct UX features. Used telemetry data to create live graphs of data center resource usage.

**MIT ZERO / Coding Captain / C, C++** 9/14-3/15

- Reached Worldwide Semifinal stage.
- Controlled SPHERES satellites in the ISS. Used C/C++ to locate POIs on asteroids and photograph them.
- Optimized 3D movement algorithms by 70% in order to maximize the number of POIs reached within the time constraint.

## SELECT PROJECTS

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**TUNE JUNGLE / Python, ffmpeg, Node.JS, Firebase, Tensorflow** 5/17-PRES

- Created web app which allows users to search for music clips to augment online communication
- Used forced alignment techniques to pattern match between popular music and lyric tracks.
- Explored using Hidden Markov Models and RNNs to improve accuracy.

**GENERATING GROUPCHATS / Python, Tensorflow** 11/17

- Trained character based LSTM networks and scraped social media data to generate group chats between individuals.
- Optimized batch size, number of layers, etc. Eventually able to generate a seemingly realistic chat history which correctly modeled the vocabulary and sentiments of the individuals involved.

**EVENT EYES / Node.JS, Microsoft Azure, Android (Java)** 11/15-2/16

- Created Android application that detects important information from event flyers and adds it to your calendar.
- Worked on Optical Character Recognition using the Google Tesseract engine, text parsing using NLP to find key information, and Android front end and back end.

## ORGANIZATIONS

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**PROJECTS @ UCSD / Founder** 5/17-PRES

- Teamed up with two peers to start project incubator.
- Sourcing projects from local startups and organizations.
- Mentoring and guiding student teams to develop solutions

**TESC / ProDev Commitee** 9/15-4/17

- Organized events which prepared UCSD students for the workforce including DeCAF, UCSD's student run career fair.

## SKILLS & HONORS

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**GENERAL:** C/C++, Bash, Node, MongoDB

**DATA:** Python, Tensorflow, SciPy

**NETWORKING:** libuv, gtest, TCP/IP

**ANDROID:** Java, Firebase, JUnit, Unity, NFC

**WEB:** HTML/CSS/JS, ReactJS, ExtJS, jQuery,

**HONORS:** SD Hacks Viasat Award '16, 1st Place  
UCSD Hack Day '16, 7x Provost Honors