SAJAN JAI GUTTA

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EDUCATION

University of Southern California, Viterbi School of Engineering - Los Angeles, CA **August 2018-Present**
Computer Science and Business Administration (Bachelor of Science)
Cumulative GPA: 3.89; **4.0 in-major GPA**

- *Expected graduation May 2022;* Planned M.S. in Computer Science through Progressive Degree Program (complete December 2022)
- *Honors:* Viterbi Top Scholars Award + Scholarship, USC Presidential Scholar, Honors student, Dean's List every semester

GITHUB

View my Github work at **https://github.com/sjgutta**. There is a personal portfolio and a few other repositories available there.

EXPERIENCE

Discotech Backend Developer (more information on Github) **August 2019-Present**

- Developed innovative technologies in Discotech's backend and API to create competitive advantages.
- Designed an event recommendation system with Tensorflow. Utilized unique combination of collaborative and content-based filtering to address the cold-start problem. Integrated Firebase for tracking user interactions in the app and website.
- Optimized backend with effective caching. These optimizations reduced Discotech's average API response time by over 28%.
- Implemented event review prioritization system, built Python tool to apply mass updates to Discotech's Wordpress site, migrated code base to Python 3, developed object-oriented redirect system, enacted venue popularity system, and more.

USC Marshall Business Student Government Senior Advisor, VP, Head of Professional Affairs **January 2019-Present**

- Coordinate workshops and events on campus for students' professional growth, manage and utilize corporate relationships within Marshall Business School (e.g. Marshall corporate contacts database, KPMG case competition, updating Marshall's career database)

Northrop Grumman Software Engineering Intern (two summers) - Redondo Beach, CA **May 2019-August 2020**

- Currently maintaining a Secret security clearance as a result of interning at Northrop Grumman.
- Worked as a Software Engineering Intern in Summer 2020 working on secure satellite communications. See projects below.
- Served as the Team Lead for 11 interns in Explore Aerospace 2020 event. Earned Best Overall award out of 35 teams of interns.
- Held position as a System Engineering Intern in Cybersecurity for Summer 2019: earned Top Performer award.

Discotech Marketing/SEO + Web Development Intern **November 2018-August 2019**

- Facilitated new client onboarding process, added 130+ venues into Discotech system, created web pages and content for SEO

PROJECTS

Northrop Grumman Advanced EHF On-Orbit Test Suite **Summer 2020**

- Developed a full test suite for executing satellite crosslink configurations and testing for radiometric data via web socket commands.
- Wrote a full test suite in python and XML and provided GUI design as a template for engineers to use, per request of managers.

Northrop Grumman Command Constraints Parser **Summer 2020**

- Implemented an object-oriented parsing system in Python. Parser converts database constraints and command information into constraint files in postfix notation to be run on a payload for a classified NG program.

Northrop Grumman STIG Tracking Tool **Summer 2019**

- Created a python tool to standardize and automate cybersecurity assessments and reporting that was adopted company-wide
- Stores and analyzes assessment data, identifies vulnerabilities in NG systems, and generates workflows for cybersecurity engineers
- Reduced reporting process from 60+ hours to less than five minutes. Allows increased assessment scope and accurate risk mitigation

USC Schedule Generator (on my Github) **Spring 2020**

- Utilized Java on the backend and Jaunt for web scraping USC's course data. Frontend is built with JSP pages and Bootstrap styling.
- The Java Dynamic Web App allows USC students to enter their course requirements and time preferences. The application applies an algorithm based on the interval scheduling problem to return a course schedule that fits the student's requirements.

Boeing Case Competition at USC (2nd place) **February 2020**

- Made key decisions to maximize profitability of an upcoming aircraft model, performed a cost-benefit analysis, determined an aftermarket strategy, implemented a thorough production and spares provisioning plan, and presented the plan to Boeing executives.

SKILLS

Languages: Python, Java, C++, C, LabView (G), Perl
Web Design: HTML, CSS, XML, REST APIs, Bootstrap, JSP, Java Servlets, Javascript, jQuery, AJAX, Jinja templates, WTForms, MVC Model
Relational Databases: SQL, mySQL, Peewee ORM, JDBC, MS SQL Server, pyodbc, UML
Other: Tensorflow + Keras, pandas, numpy, unit testing (pytest), flask, web scraping, pydocs, WordPress, Visual Basic for Applications

ACTIVITIES

On-Campus Organizations: USC Sports Business Association, USC Sports Analytics, Club Tennis, USC Association for Computing Machinery
Extra Hobbies/Interests: Chess (USCF Rating 1803), Piano