S. SHANMUKH SWAROOP

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EDUCATION

Year	Degree/Program	Institute	%/CGPA
2016-2020	Bachelor of Technology (B.Tech) in Chemical Engineering	Indian Institute of Technology Madras (IIT) Chennai, India	8.64/10
2016	Class XII (CBSE-AISSCE)	Maharishi Vidya Mandir Chennai, India	93.4%
2014	Class X (CBSE-AISSE)	DAV School Adambakkam Chennai, India	10/10
EVDEDIENCE			

EXPERIENCE

JP Morgan Chase & Co.

May 2019 - July 2019

Software Engineering Intern

Bengaluru, India

- Worked with the Tech team of a web application to ingeniously visualize work tracking of employees which was used by employees of the company from developers to stakeholders.
- Built a supervised machine learning model with 99.73% accuracy to predict future balances up to a week, earning commendation and award from higher management as a part of JP Morgan Chase's **Global Hackathon**.

Real Tycoon May 2018 – July 2018

Web Developer Intern

Chennai, India

- Single-handedly pioneered and launched the website for a digital marketing agency, which partners with clients to power up their growth opportunities by leveraging the digital platforms that hold the attention of consumers.
- Incorporated **React.js & MySQL** resulting in a **20%** increase in the number of client interactions per week.

RESEARCH PROJECTS

Weighted Graph Partitioning Algorithm for Optimal PMU Placement

April 2019 - September 2019

Dr. Sridharakumar Narasimhan

- Worked on a more efficient partitioning algorithm by weighing the edges of a power network which is conceptualized as a graph with the electrical lines as edges and buses as nodes.
- The proposed modification will ensure that a line of higher impedance is preferred over a line of lower impedance, to be in the cutset.

Algorithm to obtain Maximal cut on a polygon with dead zones

September 2019 - Present

Dr. Sridharakumar Narasimhan

- Working on an optimization algorithm to maximally cut a polygon with dead zones into user-defined shapes and sizes.
- The algorithm will be robust enough to be able to solve problems of higher and lower dimensions (volume and length respectively).

AWARDS AND SCHOLASTIC ACHIEVEMENTS

- **Sangam ML Hackathon**: Won the 2nd prize in the National level hackathon where we built spacio-temporal machine learning models to accurately predict and visualize the pollution in various cities using proprietary data.
- **KVPY Scholar:** Secured an All India Rank of **113** and a recipient of KVPY Fellowship offered by IISc, Bangalore.
- **JEE:** Ranked **1716**th in the Joint Entrance Examination 2016 taken by over 1,000,000 students across the country.

CONFERENCES ATTENDED

IPSE 2019: Co-authored a paper on Weighted Graph Partitioning Algorithm which was accepted and presented at Indian Process Systems Engineering Conference (IPSE 2019), Chennai, India.

Coursework

- Introduction to Programming
- Computational Techniques
- Probability, Statistics and Stochastic Processes
- Data Structures and Algorithms for Biology
- Graph Theory and its application in Process Design
- Multivariate Data Analysis for Process Modeling
- Statistical Design and Analysis of Experiments
- Data Analysis for Modeling and Monitoring of Reaction Systems*
- Process Optimization*

LANGUAGES AND TECHNOLOGIES

- **Programming Languages:** C++, PHP, HTML, CSS, Java, Javascript, React.js.
- **Software Packages**: MySQL, Git, MATLAB, Latex.

POSITIONS OF RESPONSIBILITIES

Chemical Engineering Society (ChES) - Secretary

July 2019 - Present

- Heading a core team of 15 members in organizing events like Industrial visits, department field trips and sporting activities where the department students get to interact and bond with each other.
- Responsible for organizing the department fest of Chemical Engineering, **Chemplus**, which sees footfall from colleges across the country.

Chemical Engineering Society (ChES) - Head of Web Operations

August 2018 - May 2019

- Maintained of the official **ChES** website used by over 600 students in the campus.
- Headed a team of 3 coordinators and built and maintained a dynamic and interactive website for **Chemplus**, the institute's Chemical Engineering department fest, that increased footfall of the event by **50%**.

E-Sports Club - Coordinator

August 2017 - May 2018

- Forged the club's foundation and succeeded in overhauling the gaming culture in the college being the maiden vear of the club.
- Organized multiple gaming tournaments throughout the year and received a colossal participation from the students in all of these tournaments.

Inter IIT Sports Meet - Facilities and Requirements Coordinator

August 2018 - May 2019

- Communicated with contractors to ensure production requirements (galleries, stages, barricades, etc) were met in a timely manner.
- Handled media team requirements to facilitate live streaming of matches for the **first time** in IIT Madras.

EXTRA-CURRICULAR ACTIVITIES

• Captained the hostel team and secured **Gold Medal** in the **Weightlifting** Schroeter.

April 2018

Represented the hostel team and secured Silver Medal in Weightlifting Schroeter.

April 2017

Volunteer at Terry Fox Run to raise awareness about cancer.

September 2017