SASHANK MISHRA

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ACADEMIC QUALIFICATIONS

Year	Degree/Board	Institute	CGPA/%
2016 - Present	B.Tech. - Information Technology	IIIT Allahabad	8.72/10.00
2015	ISC	Guru Har Rai Academy, Kanpur	96%
2013	ICSE	Guru Har Rai Academy, Kanpur	93.33%

WORK EXPERIENCE

Software Development Internship *January 2020 – Present*

Cisco Systems Inc., Bangalore

- Technology Stack – Python, Pytest, Cafy, IOS-XR
- Working under the Service Provider (SP) team to develop the Automation Support for testing the Cloud Native BNG (Broadband Network Gateway) in Cafy.
- At present, cnBNG will be supported on ASR9000 routers, having the IOS-XR 7.0 platform.
- Working with the configuration and testing using the ASR9k and Spirent Test Center.

Google Code-In 2019 Mentor

Student Mentor for TensorFlow Organization *December 2019 – February 2020*

- One of the mentors selected by the TensorFlow Organization.
- Responsible for introducing the students of age 13-17 to the world of open-source, and to make them aware of the work being done by TensorFlow.
- Also, created and monitored certain tasks related to some basic problems in Machine Learning and some pre-existing issues in the library.

Research Internship *May 2019 – July 2019*

R&D Project under Dr. Sreejth Padinhatteri, Inter-University Centre for Astronomy and Astrophysics, Pune

- Technology Stack – Zemax OpticStudio, ZOS-API, Python: Numpy, Scipy, Scikit-learn
- The project aimed to develop a Machine Learning based Optical fine Alignment tool. The tools aim to model the variations in the Zernike Coefficients due to the misalignment of the optical components of the telescope, and then apply various Machine Learning algorithms to accurately predict the exact component having the misalignment, and the actual misalignment.
- This tool is proposed to be used in the **Solar Ultraviolet Imaging Telescope (SUIT)**, one of the payloads of the Aditya-L1 mission of **Indian Space Research Organization (ISRO)**

NOTABLE PROJECTS

Reinforcement Learning And Its Application in Smart Electricity Markets *August 2019 – December 2019*

7th Semester Mini Project under Prof. OP Vyas, IIIT Allahabad

- Technology Stack – Python: OpenAI Gym, Tensorflow, Numpy, Scipy, Matplotlib
- The project aims to model a smart market consisting of a single broker, which tries to minimise the difference between the profit and loss, and tries to replicate and incubate the dynamic substance of the market.
- It uses the semi-supervised technique of Reinforcement learning, to model the actor, critic and the environment.
- For model creation, development and application of algorithms, and simulation, we used OpenAI Gym
- We used the public data available at **Independent Electricity System Operator (IESO).** IESO contains various reports generated by the Ontario's power grid systems, and provides detailed reports indicating the demand, supply, tariffs and all other parameters

Spectral Analysis and Forecasting on Astronomical Time Series

6th Semester Mini Project under Prof. Pavan Chakraborty, IIIT Allahabad *January 2019 – May 2019*

- Technology Stack – Python: Numpy, Scipy, Astropy, astroML, Tkinter
- The project employs the use of various Periodogram-based techniques to estimate the Power Spectral Density at various frequencies.
- The above-mentioned methods were employed on both evenly-sampled data (LIGO) as well as unevenly-sampled data (LINEAR)

Text to Image Generation using Generative Networks

5th Semester Mini Project under Prof. GC Nandi, IIIT Allahabad *August 2018 – November 2018*

- Technology Stack – Python: TensorFlow, Tensorlayer, Numpy, Scipy
- Employs the use of Generative Adversarial Networks (GAN) to convert an input text into corresponding images.
- Model was trained on VGG Flowers and UCSD Birds dataset + their captions.

LastMile

Project at Hack36 '19 *January 2019 – January 2019*

- Technology Stack – Django, Solidity, Metamask, Javascript
- Aims to automate the process of the compensation provided to the passengers when flights are delayed/canceled, by levaraging the power of smart contracts.
- The Airlines can use the developed API to drive the passenger experience.

SecTra

Project at Prototype '18 *October 2018 – October 2018*

- Technology Stack – Django, Kotlin, TensorFlow, AWS
- Employs the use of Object Detection to identify the items not allowed in flight travels. It also differentiates between the items allowed in carry bag or check-in bag.
- The project received 5th position at the Hackathon.

Aparoksha'18 Official Campus Ambassador Android Application *December 2017 - February 2018*

- Technology Stack – Kotlin, Firebase (Realtime Database, Storage, Authentication, Functions, Analytics, Messaging), REST APIs
- The app is centered for a particular user, providing various features.
- The app is available on Google Play Store, with over 1000 downloads, all over the country.

TECHNICAL SKILLS

- **Programming Languages–** Java, Python, C, C++[Intermediate], MATLAB, Kotlin[Beginner]
- **Tools & Technologies–** Keras, Scikit-learn , TensorFlow, Matplotlib, Numpy, Scipy, Android Studio, Firebase, Netbeans, Git, Django, Eclipse, MySQL, PostgreSQL, Visual Studio Code, REST APIs

EXTRA-CURRICULARS

- **Head, Technical Department**, Pragma '19 - Developer and Design Conference
- **Coordinator, App Development Wing, GeekHaven** - The Technical Society of IIIT Allahabad
- **Organiser**, IIITA Hacks '17
- **USG Information Services**, IIITA MUN '17

RELEVANT COURSES

Mathematics – Linear Algebra, Probability & Statistics, Convex Optimization

Computer Science – Design and Analysis of Algorithms, Data Structures, Database Management Systems, Operating Systems, Computer Organization and Architecture, Artificial Intelligence, Computer Networks, Soft Computing, Image and Video Processing, Advanced Data Analytics, Computational Intelligence.