Shushant Kumar

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EDUCATION

B.Tech in Computer Science and Engineering

National Institute of Technology Karnataka	CGPA – (9.16/10.00)	Jun 2020
12th grade, AECS Magnolia PU College	95.8%	Jun 2016
10th grade, Air Force School ASTE	CGPA – (10.00/10.00)	Jun 2014

RESEARCH INTERESTS

Artificial Intelligence, Deep Learning, Data Science, Backend Development

COURSEWORK TAKEN

Data Structures and Algorithms, Objected Oriented Programming, Theory of Computation, Design and Analysis of Algorithms, Computer Networks, Database Management and Systems, Advanced Data Structures, Concrete Mathematics, Operating Systems, Number Theory and Cryptography, Compiler Design, Distributed Database Systems, Digital Image Processing, Data Mining and Warehousing.

INTERNSHIPS

Data Science Intern, Sprinklr India   **May 2019 - July 2019**

Sprinklr provides a unified customer experience management platform for enterprises. Worked as Data Science Intern in Machine Learning department.

- Worked in the Machine Learning team and developed VISION related services.
- Designed new CRNN and FCN models for image processing.
- Worked with Docker. Rancher and Kubernetes.

***Backend Developer,* Rubit Technologies Pvt Ltd**   **Mar 2018 - Jun 2018**
KITISU

KITISU a global cryptocurrency exchange platform: Worked as backend developer

- Worked on the backend development of the main website.
- Fixed bugs in the existing website and implemented enhancements.
- Designed and built effective and attractive UI for various page elements.

***Web Developer,* Zendesk Technologies**   **Oct 2017 - Feb 2018**
Savemonk

Savemonk is an online cashback portal for e-commerce organizations: Worked as frontend developer

- Extended and optimized the main site using Angular5 and Java core backend.
- Developed CRM portal and price comparison portal which compares prices of the commodity across multiple ecommerce sites.

RESEARCH EXPERIENCE
Localization of Focal Cortical Dysplasia   **Feb 2019 - Current**

Working on image segmentation for identification and localization of Focal Cortical Dysplasia (congenital abnormality) using Deep 3D Fully Convolutional Network and Image processing algorithms. The aim is to segment out the abnormality in 3D space and determine its volume. Developed a new Deep FCN architecture which surpassed the state of the art results. The results are published in the journal JBHI.

COURSE PROJECTS
Parking Lot Detection in Satellite images   **Feb 2019 - Apr 2019**

- Developed a CNN model to successfully predict parking slots in a satellite image and count number of empty parking slots using Python3 as the programming language.
- The dataset was acquired from SpaceNet Challenge and the robustness was tested on various other images from different sources.

Parallax   **Sept 2018 - Nov 2018**
- Developed an online portal for automating the services in Health Care Center and Sports Complex in NITK Surathkal.
- Developed using Angular7 frontend, Express Js server with MySQL database.
- Implemented a pre diagnosis chat bot using NLP using NLTK library.

Epiphany   **Sept 2018 - Nov 2018**
- Implemented a natural disaster prediction system leveraging NLP from social media content to identify any anomaly in nearby regions and spread the awareness through it.
- Also the application takes live geographical movements data from monitoring centers and creates a cumulative display and notification system.
- Project got selected for showcase at national level by Microsoft India for AXLE 2019.

Travelio   **Feb 2018 - May 2018**
- Developed an Android Application to increase the users productivity as traveler embedded with features including offline internet, Geo fencing and Cognitive Services
- Project got selected for showcase at national level by Microsoft India for AXLE 2018.

EmereNvendre   **Jan 2018 - Mar 2018**
- Developed an online marketplace for classified ads Web Application to buy and sell commodities in NITK Surathkal.
- It was developed in Angular5 for frontend, NodeJs and ExpressJs used for server side with MongoDB as the database.
- Implemented fake object detection mechanism to remove fake posts using YOLO object detection model.

Sign Language Alphabet Recognizer   **Dec 2017 - Mar 2018**
- Developed a sign language alphabet recognizer using Python, OpenCV and Tensorflow for training InceptionV3 model, a convolutional neural network model for classification.
- Developed REST API using Django-rest framework to make the service available across all platforms.

PUBLICATIONS, PRESENTATIONS AND CONFERENCES

- Shushant Kumar, Edwin Thomas, Anmol Horo, "Identifying Parking Lots from Satellite Images using Transfer Learning", IEEE International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT), 2019.
- Shushant Kumar, Anmol Horo, K Chandrasekaran, "Managing Fake Item Posts in Online Classified Ads by Image Classification using Convolution Neural Network", Fifteenth International Conference on Information Processing (ICInPro), 2018.

TECHNICAL SKILLS

Operating Systems: Windows 7/8/8.1/10, Linux, Android, MacOS

Programming Languages: C, C++, Python, Javascript, Matlab

Database and Client/Server Technologies: MySQL, MongoDB, Sqlite3, Firebase

Software Tools: Git, OpenCV, Logisim, VS Code, PyCharm, SQLAlchemy

Web Applications: Django, Flask, Angular, NodeJS, ExpressJS, HapiJS

Others: Bootstrap, Verilog HDL

AWARDS AND EXTRA-CURRICULAR ACTIVITIES

- Microsoft CodefunDo++ Hackathon senior league winner. Top 18 teams to showcase the project at AXLE 2019 at Microsoft India among over 5200 teams.
- Best paper award in ICInPro 2018 for presenting the research paper in Data Science stream.
- Siemens MakeIT Real Hackathon finalists, finished in top 10 among over 1300 teams.
- Microsoft Codefundo Hackathon online and senior league winner. Top 15 teams to showcase project at AXLE 2018 at Microsoft India among 4400 plus teams.
- KVPY Scholar 2015. Got selected for the prestigious award by DST Govt of India.

VOLUNTEER WORK

- **Campus Ambassador for Internshala**   **Oct 2016 - Nov 2016**
  Worked as Campus ambassador for Internshala an internship and online training platform which helps student find internships with organizations in India. Displayed the process and took sessions on the same and helped students connect to it and increase the number of applicants through this portal.

COMMUNITY WORK

Taking Arithmetic classes   **Aug 2017 - Aug 2017**

Took arithmetic classes for under privileged students of NITK English Medium School on weekends for a class of around 50 students.

HOBBIES

Participating in Marathons. Have participated in 2 half-marathons.

MEMBERSHIPS

ACM student member, ISTE NITK student chapter member

LEADERSHIP EXPERIENCE

- Computer SIG and Web Team Head at Technites Annual tech fest of NITK
- Recruitment Head at Indian Society for Technical Education (ISTE) NITK