

Shailendra Kumar Gupta

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EDUCATION

Bachelor of Technology in Computer Science and Engineering
INDIAN INSTITUTE OF TECHNOLOGY (IIT) ROPAR

Punjab, India | July 2016 - June 2020

PUBLICATIONS

AN END-TO-END FRAMEWORK FOR DYNAMIC CRIME PROFILING OF PLACES

Authors: Shailendra Kumar Gupta, SHREYANSHU SHEKHAR, NEERAJ GOEL, MUKESH KUMAR SAINI

- **April 2021** - Accepted as a Book Chapter in the Book 'Smart Cities: Concept, Practices, and Applications' (CRC Press, Taylor and Francis Group)
- Developed an automatic framework to estimate crime score of locations using online news articles
- Used Natural Language Toolkit(NLTK) and Stanford CoreNLP tool to extract relevant information like crime type, crime severity, location information, etc. from news articles
- Created Web Interface to look over crime score of various locations, and heat-map to visualize crime density of locations in India

WORK EXPERIENCE

COMMVault SYSTEM INC. | SOFTWARE ENGINEER

Bengaluru, India | July 2020 – Present

- Member of **Windows File System** team
- Gained good knowledge of Windows Operating System and Windows Internal tools
- Understood various backup and recovery concepts we use at Commvault for data protection and management
- Contributed to Scan, Backup, Restore and Distributed Framework code modules for both internal and customer issues
- Currently working on Content Indexing project module to enhance the scalability and stabilize the feature on both Windows and Unix platforms

ARISTA NETWORKS INC. | SOFTWARE DEVELOPER INTERN

Bengaluru, India | May – July 2019

- Deployment of vEOS routers on Google Cloud Platform(GCP) and integration with Arista Auto-test Framework
- Setting up the required topology using vEOS routers deployed on GCP
- Automation of packet forwarding performance test using Pkt-gen, a tool for generating high-speed packets

SANFOUNDRY | CONTENT DEVELOPER INTERN

| Jan – Mar. 2019

- Read the book '**The C++ Programming Language**' by **Bjarne Stroustrup** and contributed 1000 C++ questions.
- Major topics include Pointers and References, OOPs concept, lambda expression, STLs.

PROJECTS

CHATBOT

WITH DR. SHASHI SHEKHAR JHA | MAR – APR. 2019

- Built a conversational chat-bot using Sequence to Sequence model with Teacher forcing method
- Implemented bucketing method and Attention Mechanism to rightly weigh the important words in the user input
- Used reinforcement learning to improve the accuracy of the model

HUMAN ACTION RECOGNITION

WITH DR. ABHINAV DHALL | OCT – NOV. 2018

- Action recognition using star skeleton method
- Body contour detection using edge detection methods and selection of 5 extreme points of human contour for star skeleton construction
- Collection of star skeleton series for a particular human motion
- Trained Recurrent Neural Network model on series of star skeleton data

2D TO 3D IMAGE CONVERSION USING SINGLE IMAGE

WITH DR. PUNEET GOEL | MAR – APR. 2018

- 3D image reconstruction using foreground and depth map of image
- Extraction of foreground image using semi-automatic method
- Used Graph cut algorithm for foreground extraction
- Concept of vanishing point and relative height depth cue is used for preparing the depth map of images

TEACHING SKILLS

TEACHING ASSISTANT AT IIT ROPAR

2ND SEMESTER, A.Y. 2019-2020

- **Course:** Introduction to Computing and Data Structures (GE103)
- Duties were to conduct lab sessions, clarify their doubts and grade students based on their performance in labs & assignments

SKILLS

Languages: C, C++ (Proficient), Python (Proficient), Java, SQL

Technology: NLTK, Stanford CoreNLP, Windows Internal Tools, Django, Flask, Git, GCP, LaTeX, Matlab

RELEVANT COURSES

- **Mathematics Courses:** Linear Algebra, Real Analysis, Introduction to Probability Theory and Stochastic Processes, Discrete Mathematical Structures
- **CS Software courses:** Programming Paradigms and Pragmatics, Machine Learning, Artificial Intelligence, Computer Vision, Introduction to Database Systems, Compiler Design
- **CS Theory Courses:** Data Structures, Analysis and Design of Algorithms, Logic and Computability [Theory of Computation]
- **System Courses:** Computer Architecture, Operating Systems, Computer Networks, Advanced Computer Architecture, Memory Systems and Architecture
- **Humanities Courses:** Morphology, Language Processing

EXTRA CURRICULAR ACTIVITIES

- **Coding Club coordinator for the AY 2017-18:** Conducted various informative sessions for students on competitive and general programming
- **Core member of Dance club during freshman year:** Represented IIT Ropar at cultural fest of IIT Mandi, Exodia
- **Member of Anchoring team during freshman year:** Hosted events during the cultural fest of IIT Ropar, Zeitgeist

ACHIEVEMENTS

- Awarded scholarship from the **Indian Air Force Benevolent Association** under the Subroto Memorial Scholarship for the year 2017-2018 for **excellence in academics in B. Tech. 2nd Year.**
- Secured JEE Advanced rank 3552 out of 150K shortlisted students.