Utkarsh Vashishtha

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EDUCATION:

Birla Institute of Technology and Science, Pilani Campus, Pilani, India   **Aug 2015 – Jul 2019**

B.E(Hons.) Computer Science (Major), Finance (Minor) ; **GPA: 9.28/10.0 – (Distinction)**

Coursework : Machine Learning, Information Retrieval, Operating Systems, Computer Networks, Computer Architecture, OOP principles and design, Computer Programming, Database Systems, Data Structures and Algorithms, Design and Analysis of Algorithms, Compiler Construction, Financial Management, Derivatives and Risk Management, Fundamentals of Finance and Accounting, Business Analysis and Valuation

EXPERIENCE:

AppDynamics, Cisco, Software Engineer : R&D   Bangalore, India ; **Jul 2019 – Present**

- Design and development of a distributed data-ingestion platform for streaming structured and un-structured data analytics, leveraging open source technologies such as *Apache Kafka, Elasticsearch, Apache Avro, Schema-registry* for the data-plane.

Qubole Inc., Software R&D Intern   Bangalore, India ; **Jan 2019 – Jun 2019**

- Worked on various components of *Presto*, an open source distributed query engine and its server-less offering, *Quantum*. High Availability of *Quantum* clusters, inclusion of the faraday library for tunnel proxy port in Presto, middleware improvements for stable connection between client and *Presto* servers, *Quantum Hive Auth* (secure layer over the Hive meta-store)

Citicorp Services, Technical Analyst   Pune, India ; **May 2018 – Jul 2018**

- Development and automation of trade algorithms for real-time detection of trade anomalies, for the Commodities business unit.
- Automation of SDLC Workflow, Automatic merging of Source Codes to a common Repository (similar to *Git*) and automation of *Microsoft SQL* database scripts validations as a pre-deployment step on Production servers.

YRALS Digital India Pvt. Ltd., Software R&D Intern   Mumbai, India ; **May 2017 – Jul 2017**

- Chroma-Keying : Green-screen(any color) removal effect for dynamically generated videos on a web-cam, using *JavaScript*.
- Template-Engine : Designed a web-app to allow users to generate frame templates for automated video creation.

RESEARCH | PUBLICATION:

Application Monitoring using libc Call Interception, AppDynamics, Cisco R&D   **Jan 2020 – Jul 2020**

- Developed an easy to use, language-agnostic, platform-agnostic monitoring tool, for distributed applications, in Golang. Research work accepted for publication in the *Springer ICICCS 2020 journal*. (*To be published by the end of 2020*)

Nowcasting, Undergraduate Research Project   **Jul 2018 – Dec 2018**

(*Under the guidance of **Dr. Navneet Goyal**, BITS, Pilani*)

- Developed a ML model for Earthquake prediction near water bodies using Dynamics Factor models and Kalman Filters.
- The implementation was based out of data provided by the Ministry of Earth Sciences, Government of India based on the paper *Geodetic Constraints on Tectonic and Anthropogenic Deformation and Seismogenesis of Koyna–Warna Region, India.*

Human Fall Detection, Undergraduate Research Project   **Jan 2018 – Jun 2018**

(*Under the guidance of **Dr. Sanjay Singh** in CSIR- Central Electronics Engineering Research Institute (CEERI), Pilani*)

- Developed a deep learning model for detecting a human fall using temporal and spatial aggregations from video processing.
- Employed the 3D-CNN and LSTM models for mapping features to a data point which was then fed to a Softmax classifier.

ACADEMIC PROJECTS:

- Heart disease detection by leveraging the concept of Active Learning
- Hybrid Music recommender system with collaborative and content-based filtering augmented with sentiment analysis
- Compiler Creation (Lexer, Parser, Intermediate code generator, ASM code generator, for a custom C++ like language)
- Implementation and usage of a k-NN classifier in scheme, a functional programming language, for product recommendation
- Comprehensive stock analysis : fundamental and time-series technical analysis of a bank in the National Stock Exchange
- Beta and Stock price analysis : CapEx. analysis and plotting time-series charts for fundamental indicators of a firm

AWARDS / EXTRA-CURRICULARS / SOCIETIES

- **KVPY** (Kishore Vaigyanik Protsahan Yojana) **fellowship,** Indian Institute of Science, Bangalore, India   **2014**
- **Member, ACM** (Association of Computing Machinery)**,** BITS-Pilani Chapter   **2016 –18**
- **Captain,** Athletics team, BITS-Pilani, won numerous medals as a sprinter   **2017 –18**
- **Head, SSMS** (Society for Student Mess services) **technical team**, BITS-Pilani   **2017 –18**
- **Member, Department of Theatre,** BITS-Pilani   **2015 –18**

MOOC(s) / PROGRAMMING SKILLS:

- *Golang* principles and optimization for high performance : Cisco Learning and Development program
- *Docker* with *Kubernetes* : Cisco Learning and Development program
- *Apache Kafka, Elasticsearch, Scala* and *Spark* for Big Data and Machine Learning : Udemy
- Neural Networks and Machine Learning, : Coursera
- Programming : *Java • C • C++ • Python • Golang • Ruby • R*
- Databases and Frameworks : *Elasticsearch, Hibernate, Kafka, Presto, Spark, Ruby on Rails, Guice, Spring MVC, Gradle*