Yashwanth Y S

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Education

R.V. College of Engineering (RVCE) [🌐] — Bengaluru, India
Bachelor of Engineering(B.E) in Computer Science and Engineering; ***GPA: 9.26/10*** — *Aug 2017 – Aug 2021*

Research Experience

Samsung R&D Institute | Advanced Technology Lab (ATL) [🌐] — Bengaluru, India
Student Trainee | *Mentors: Vikram Mupparthi, Rohini Nookala* — *May 2020 - July 2020*

- Worked on the On-Device **Hinglish Detection** feature for Samsung Wearable's Smart Reply Solutions to cater to the common use of Hinglish, a blend of Hindi and English, on social media by Indians.
- Curated an extensive dataset comprising **150,000 sentences**, meticulously sourced from platforms such as Twitter, Facebook, and blogs, ensuring diverse and representative data.
- Engineered a binary classifier using LSTM, CNN, and self-attention layers. The model excels at differentiating Hinglish from eight major Indian languages in chat interactions with **94% accuracy** on real-world data. (Slides)

Samsung R&D Institute | Advanced Technology Lab (ATL) [🌐] — Bengaluru, India
Student Trainee | *Mentors: Arabinda Moni, Dr. Pinaki Bhaskar* — *May 2019 – July 2019*

- Developed a comprehensive end-to-end solution that **extracts personality** insights from real-time conversations by generating triplets (personal category, value, and speaker), to make **voice assistants more personalized**.
- Leveraged state-of-the-art (SOTA) contextual embeddings from the Universal Sentence Encoder and InferSent, achieving an **90% accuracy** on real-world conversations.

RVCE CSE Department [🌐] **& System Consultant Information India** [🌐] — Bengaluru, India
Research Project Intern | *Advisors: Dr. Deepamala N, Dr. Shobha G* — *May 2019 – June 2020*

- Team of three students, mentored by two professors from R.V College of Engineering, worked on a research project backed by a grant from System Consultant Information India (KSC, Japan). Published 3 papers.
- Worked on **transforming natural language inputs**(in English & Japanese) **into SQL queries** by blending rule-based techniques with machine learning methodologies (Paper1), leveraging Elasticsearch for descriptive inputs (Paper2), and employing LSTM model for mapping data values in input to columns of the table (Paper3).

Industry Experience

Citrix R&D [🌐] **(Now Part of CSG** [🌐]**)** — Bengaluru, India
Software Engineer - 2 | *Citrix Workspace App for Mac Team* — *July 2021 – Present*

- Developed a **cross-platform(macOS, windows & Linux) analytics library called Citrix Analytics Service(CAS)**. Collects data from **100+ million** MAU, providing a comprehensive lens into app usage. Leveraged unsupervised ML algorithms on analytics data to unearth insights, influencing stakeholders to make key decisions.
- Crafted a dynamic **launch status indicator**, enhancing user transparency during the launching of virtual apps and desktops. This enhancement was pivotal in driving the **Net Promoter Score (NPS) from 15 to 20.**
- Developed and integrated an API to swiftly launch remote virtual apps and desktops which slashed launch times by 40% (around 3 seconds) through intelligent local caching of icons and web content.
- Engineered **single sign-on** feature for remote desktops in the Citrix Workspace App, utilizing **Azure Active Directory** for authentication. Eliminates the requirement of password entry to logging into a remote desktop.
- Enhanced auto start experience of Citrix Workspace App after system start based on user preference.

Citrix R&D [🌐] — Bengaluru, India
Software Engineering Intern | *Advisors: Dr. Rajashree Shettar, Omkar Ramtekkar* — *Jan 2021 – June 2021*

- Work done as part of internship was presented as **major project** at college during the 8th semester. Co-advised by both R.V College of Engineering Professor and Citrix Engineer during the course of internship.
- Optimized the **Continuous Integration (CI)** process by identifying and parallelizing certain segments of the pipeline build scripts, reducing build time from **2 hours to 45 minutes**, specifically for macOS applications.
- Improved the stability of the master branch builds, decreasing the build failure rate from **20% to 5%**, enhancing the team's overall efficiency. (Report) (Paper)

Selected Publications [List]

- Akshar Prasad, Yashwanth Y S et al, Enhancement of Natural Language to SQL Query Conversion using Machine Learning Techniques, International Journal of Advanced Computer Science and Applications (IJACSA) (2020)
- Sourabh S Badhya, Akshar Prasad, Yashwanth Y S et al, Natural Language to Structured Query Language using Elasticsearch for descriptive columns, International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS), sponsored by IEEE (2019)
- Akshar Prasad, Shobha G, Deepamala N, Yashwanth Y S et al, Machine Learning Techniques to Understand Partial and Implied Data Values for Conversion of Natural Language to SQL Queries on HPCC Systems, International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS), sponsored by IEEE (2019)
- Yashwanth Y S et al, Improvement of Continuous Integration Pipeline for Faster and Stabilized Builds for macOS Applications, Science,Technology and Development Journal (2021)

Projects

SEE-SCAN

- An Android Application to scan text from camera photos and gallery photos and the text recognized from photos can be edited as required. SQLLite was used to store edited text and recognized text from photos.

Automatic Short Answers evaluation

- Evaluation of answer to 1-mark questions that appear in examination is automated using an ensemble deep learning neural network of LSTM and CNN, which compares the semantics of the student's answer and reference answer.
- Used a combination of GloVe and Universal Sentence Encoder for embeddings and obtained an accuracy of 87%.

Automatic Helmet Detection & Violation Details Management

- Used YOLOv3 object detection model to detect vehicle drivers without helmets and stores the vehicle number in MySQL database and other driver profile details are stored in MongoDB.
- The model was tested using a real live feed from my college entrance camera and obtained an accuracy of 76%.

Awards & Achievements

- **KCET Undergraduate Entrance Exam:** Top 500(318th rank) among 180K applicants (2017)
- **COMEDK Undergraduate Entrance Exam:** Top 200(196th rank) among 70K applicants (2017)
- **Department Topper:** Academic Topper for 1st-year Information Science and Engineering Department with an aggregate of 9.66 GPA (2018)
- **ACM ICPC 2019, Regionals:** Part of the team that qualified for APM ICPC Regionals from my college (2019)
- **Samsung Parichay Coding Contest:** 16th rank among 8000 participants in Samsung Parichay Coding Contest hosted on InterviewBit. Was one of 21 second-year students across India who were offered research internships by Samsung based on 2 coding contest rounds and interviews (2019).
- **ALL Coding Contest:** 3rd Place in ALL Coding Contest held at PES University with 350 teams participating across the country (2020).
- **Citrix Spotlight Light:** Awarded for the best performance in 2022 Q3 quarter.

Skills

Languages: C++, Python, Swift, Objective C, JavaScript, SQL

Libraries: PyTorch, Keras, TensorFlow, OpenCV, Scikit-Learn, Pandas, NumPy, Matplotlib, Flask, swift combine

Development: macOS and iOS app development, Web development

Relevant Coursework

Class coursework: Linear Algebra, Calculus, Graph Theory, Differential Equations, Discrete Mathematics, Data Structures, Algorithms, Operating Systems, Compilers, Computer Networks, Data Science & Machine Learning, Image Processing, Big Data Analytics, Database Design, Mobile Development, Computer Graphics, Distributed Programming

Online coursework: Discrete Mathematics, Computer Architecture (NPTEL), Mathematics for Machine Learning, Neural Networks, Sequence Models (Coursera)