

SETU DURGESH VINAY ANNAM

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EDUCATION

Master of Science (M.S.) in Computer Science | GPA: 3.94 / 4.0

May 2021

Arizona State University (ASU) | Tempe, Arizona, USA

- **Relevant Courses:** Cloud Computing, Data Processing at Scale, Semantic Web & Data Mining, Mobile Computing, Software Security, AI, NLP

Bachelor of Technology (B.Tech.) in Computer Science | GPA: 8.93 / 10.0

May 2019

BML Munjal University (BMU) | Gurgaon, Haryana, India

- **Relevant Courses:** Distributed Systems, Big Data Analytics, Information Retrieval, Networks, Computer Vision, Human-Computer Interaction

EXPERIENCE

School of Sustainable Engineering and the Built Environment, ASU | Tempe, Arizona, USA

Software Developer

01/2021 - Present

- Developing a **React & ASP.NET webApp**; Integrating into a renowned pavement construction software as an important feature
- Working on a dashboard interface that simulates the scenarios based on climatic & geological inputs from weather stations
- Converting Matlab codebase into efficient and modular **C#** code, while incorporating complex & scientific algorithms

Advinow Medical Ltd. | Scottsdale, Arizona, USA

Software Engineering Intern

06/2020 - 08/2020

- Developed a tool that extracts the symptoms from the articles; used cutting-edge **BERT Pretrained models** and **lexical analysis**
- Achieved an **improvement in accuracy over 30%** on the mapping of symptoms to diseases using hybrid approaches
- Built and integrated **8 extensible Python modules** that facilitated autonomous extraction, annotation, and mapping
- Created **microservices, data pipelines** that collectively assisted doctors to **increase** the annotation pace **from days to hours**
- Used **GitLab** for **Continuous Integration / Continuous Deployment** of the software into scalable AWS EC2 instances

Language Technologies Research Center, IIIT Hyderabad | Hyderabad, Telangana, India

Data Science Intern

01/2019 - 05/2019

- Conducted research and published a paper under the title **"Anaphora Resolution for Telugu Dialogues"**
- Leveraged neural networks and achieved a **state of art for pronominal anaphora resolution** in Telugu dialogue systems
- Analyzed the trade-off among the features at the **semantic and morphological level**; made a **data-driven selection of features**
- Developed and deployed an innovative web app that annotates the anaphora in **up to 80 languages** of human dialogues

Tech Mahindra | Bangalore, Karnataka, India

Software Engineering Intern

06/2017 - 07/2017

- Developed a scalable **full-stack web dashboard application**, for incident tracking using **Vue.JS, Node.JS, MongoDB**
- Built an **Android app** that actively notified the employers; impacted the latest incidents **by increasing the view rate to 100%**
- Designed and implemented a **RESTful API**; used to fetch data to populate the **D3.js** charts in both web and android apps

TECHNICAL SKILLS

Programming & DB: Python, C#, Java, Javascript, C / C++, Swift, Shell / Bash, Matlab, PostgreSQL, MySQL, MongoDB

Front/Backend Dev: Node.js, React.js, Vue.js, Express.js, .NET, Django, Flask, HTML, CSS, Go, Sockets, Server-Sent Events

Tools: Git, AWS, GCP, Docker, CI/CD (GitLab, Circle-CI), Hadoop, Apache Spark, Linux, Xcode, Android Studio

ACADEMIC PROJECTS

Image Recognition as a Service | Technologies Used: AWS SQS, S3, EC2, JS SDK, Boto3, Sentry, CircleCI, React.js

Spring 2021

- Developed a **cloud application** using AWS Iaas services, where a **Node.js** web-tier EC2 instance listens for HTTP post requests
- Sends these requests to SQS queue & stores the images attached in S3 buckets, for the Python App-tier instances to process
- Load balancing / **Auto scale In & Out** of app tier is done based on the Queue size & instances picks new requests in the queue
- Achieved complete Decoupling of user requests & processing; Used Sentry for centralized Debugging & CircleCI for **CI / CD**

Covid-19 Semantic Forums | Technologies Used: Apache Solr, Flask, React.js, Neo4j

Spring 2021

- Developed a system to **semantically search millions** of covid-19 conversations **scrapped** from popular medical forums
- **Extracted** ontology, **indexed** discussions using Solr, **ranked** results using entity graph & **stored** in Neo4j for restful access

Covid-19 Contact Tracer | Technologies Used: iOS, Swift, Xcode, Python, Flask

Fall 2020

- Developed Covid-19 tracing iOS app; **notifies** the users of the potential risk of virus based on their contact & movement history
- Innovatively computed heart and respiration vitals using the time series data from core graphic (camera) & accelerometer

Glucose & Insulin Time Series Analysis | Technologies Used: Python, Pandas, Numpy, Scikit-learn, Tsfresh

Spring 2020

- Extracted Features from **large time-series data** collected from subjects using a continuous glucose monitor sensor
- Used those features to estimate the mealtime (**95% accuracy**) & amount to artificially pump small bursts of insulin to balance

LEADERSHIP EXPERIENCE

Graduate Services Assistant | Arizona State University | Tempe, Arizona, USA

08/2019 - 01/2021

- Teaching Assistant for CSE 335 (**iOS App Development**) and CSE 205 (**Objective oriented programming and data structures**)