VIJAYA TEJA RAYAVARAPU

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EDUCATION

Northeastern University, Boston, MA — Jan. 2021 – present
Khoury College of Computer Sciences — Expected graduation: December 2022
Candidate for a Master of Science in Computer Science (CGPA: 4/4)
Related courses: Natural Language Processing, Foundations of Artificial Intelligence, Algorithms, Information Retrieval

National Institute of Technology, Warangal — April 2017
Bachelor of Technology in Electrical and Electronics Engineering with First division
Related courses: Problem Solving and Computer Programming, Data Structures

TECHNICAL KNOWLEDGE

Languages:	JavaScript, TypeScript, Python, Java, C#, C++, Dart, Go, ShellScript
Databases:	MySQL, MSSQL, Oracle SQL, MongoDB, DynamoDB
Technologies:	Angular, React.js, Node.js, HTML, CSS, Flutter, Microsoft .NET, Spring, Jenkins, Git, Docker, JMeter
Cloud Technologies:	EC2, Lambda, Route 53, ELB, CFT, ACM, RDS, Google App Engine, Google Compute Engine

WORK EXPERIENCE

Software Engineer, Fidelity Investments, Chennai, India — July 2017 – December 2020

- Played a pivotal role in migration of a .NET application from internal servers to AWS environment, by working with AWS EC2, Lambda, RDS, Route 53, ELBs, CFTs and ACM and also prototyping and assessing various design decisions involved.
- Translated business requirements and developed numerous REST APIs using NodeJS, .NET and Java Spring frameworks.
- Enhanced and created multiple front-end features using Angular, JavaScript, HTML & CSS to provide seamless experiences.
- Spearheaded the development and deployment of multiple automation jobs using ShellScript, NodeJS and Jenkins.
- Built JMETER and selenium test suites for automated APIs and UI testing, bringing down the testing time to under 45 seconds.
- Solely created CI/CD pipelines for automated deployment from Git using Jenkins and UDeploy for multiple web applications.
- Coordinated and built an ETL pipeline using SSIS, SSDT, SSRS and SQL queries for automating monthly reports generation, bringing down report generation time to under a minute from 50 hours a month.

PROJECTS

Empirical analysis of micro-architecture design decisions, Research Assistant — May 2021 – August 2021

- Performed empirical investigation to find the relation between 'performance to price ratio' and various design decisions. These choices involved programming languages and scaling parameters used for APIs deployed on Google App Engine.

Recon Chess Agent — June 2021 – Present

- Devising ways to extend deterministic deep reinforcement learning algorithms and Monte Carlo search techniques to Imperfect Information Games (IIG) and POMDPs to build a Recon Chess agent for **NeurIPS 2021 competition**.

Citadel Datathon Summer 2021 (Invited by Citadel) — July 2021

- Pre-processed multiple data sets containing 500K - 1.2M rows and performed extensive EDA. Feature engineered and extracted the most impacting features by computing Pearson correlation coefficients and conducting stepwise regression. Built an MLP Regression model using this data for optimal hotel price prediction and evaluated using RMSE.

Sanskrit to English Neural Machine Translation (https://github.com/rvteja24/sans_eng_nmt) — January 2021 – April 2021

- Developed automation scripts to scrape the web and gather sentence pairs for the distant language pair of Sanskrit – English. Implemented **Transformer** based NMT model from scratch in order to better experiment with hyper-parameters.
- Conducted experiments with hyper-parameters chosen from the potential parameter space by training the Transformer model using the 38K sentence pairs gathered and achieved a best average BLEU score of 9.119 in the low resource setting.

Poker Agent using enhanced self-play techniques (https://github.com/rvteja24/pokerAgent) — January 2021 – April 2021

- Built a 6-player poker agent using Monte Carlo Counterfactual Regret Minimization algorithm along with MCTS + UCB (Upper Confidence Bound) search algorithm and custom engineered abstraction techniques to bucket similar information and action states together which are used during self-play to build baseline strategy and real-time gameplay.

ACHIEVEMENTS/ACTIVITIES

- **Graduate Teaching Assistant** for Graduate level web development course at Khoury College focusing on MERN stack – Assisting faculty with course infrastructure and students with guidance and feedback based on industry best practices.
- Elected General Secretary and Branch Representative of the students' council executive body at National Institute of Technology (NIT) Warangal – coordinated and resolved issues of a student mass of 5000 students.
- Runner up in the prestigious GSLV award competition conducted by Indian Space Research Organization (ISRO).