

# DARSH SHALIN SELARKA

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## EDUCATION

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**Bachelor of Science**, Computer Science | Specialization: Data Science *Dec 2020*  
Indiana University, Bloomington | Luddy School of Informatics, Computing, and Engineering  
**Relevant Coursework**, Data Structures, Object-Oriented Programming, Artificial Intelligence, Data Analysis & Mining, Analysis of Algorithms, Discrete Mathematics, Theory of Computing, Calculus, Database Management Systems

## SKILLS

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**Programming/Databases:** Java, Python, C, C#, C++, HTML5, CSS3, JavaScript, SQL (MySQL, SQLite), NoSQL (MongoDB), PHP, R, Swift  
**Frameworks/Libraries:** Django, React, Spring, Codeigniter, Flask, OpenCV, webRTC, Numpy, NLTK, Tkinter, pandas, Selenium, JUnit, Express, Matplotlib  
**Software Engineering:** Data Structures, Object-Oriented Programming, REST APIs, MVC Pattern, UNIX/Linux, Git, UML Diagrams, Unit Testing, Database Management, Android/iOS Development

## EXPERIENCE

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**Research Assistant**, Luddy SICE, IU | Mentor: Mr Shujon Naha (Bloomington, IN) *Jan 2020 - May 2020*  

- Built an image dataset for the projects model from over 100 videos which aimed to understand the actions of different quadruped animals
- Assisted in annotating 8000 images of 9 different quadruped animals using LabelMe into JSON format
- Effectively explored Convolutional Neural Networks to classify the actions of different quadruped animals using the labeled data

**Software Engineer Intern**, Trimax IT Infrastructure & Services Limited (Mumbai, India) *Feb 2018 - Apr 2018*  

- Integrated Paytm Payment API into the project to process and simplify online payments using UPI gateway
- Implemented in Spring Boot framework and integrated the RESTful API, Initiate Transaction API (POST) to get transaction tokens which enabled further processing of the UPI payment
- Devised a script to automate testing using Java and Selenium libraries

**Software Engineer Intern**, Thinkjain (Mumbai, India) *Mar 2017 - Jun 2017*  

- Utilized Django framework (Python) and employed MongoDB to design a server application and React as the client interface for an online job portal
- Incorporated features like filtering jobs based on user preference and session management using AuthenticationMiddleware component
- The job portal successfully managed to register more than 100 people within the first month of its launch

## PROJECTS

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**Expense Manager**  

- Developed a full-stack expense manager using the MERN stack - utilized React on the frontend, Express as the backend server and MongoDB as the database for the application

**Stock Market backend REST API**  

- Implemented a stock market REST API using Django Rest Framework with the ability to retrieve data about a stock using GET request and update data on the server-side using POST request and employed Heroku server to deploy it

**Covid-19 Chatbot**  

- Created a retrieval based chatbot in Python to educate the user about the Coronavirus pandemic by answering frequently asked questions using Natural Language Processing (NLTK), Keras, and by utilizing a special Recurrent Neural Network LSTM (Long Short Term Memory) for a response, and the Tkinter library to build the GUI

**Ultimate Tic Tac Toe AI**  

- Developed a 9x9 version of the popular Tic Tac Toe game using Python and programmed AI agents for it by implementing the Monte-Carlo algorithm, and Minimax algorithm along with Alpha-Beta Pruning

**Survival RPG**  

- Implemented a full 2D top-down survival role-playing game in Unity by incorporating Object-Oriented methodologies in C# and pathfinding algorithm (Manhattan Distance) for the AI agent

## LEADERSHIP AND EXTRACURRICULAR EXPERIENCE

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- JPMorgan Chase and Co. (Virtual Software Engineering Internship) : May 2020 - May 2020
- Serve IT Clinic, Indiana University (Teach IT Intern) : Jan 2020 - May 2020
- International Sports Club, Indiana University (Vice President) : Aug 2019 - Dec 2020
- Computer Society of India, KJSCE (Jt. Technical Head) : Aug 2015 - Aug 2017