DARSH SHALIN SELARKA

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EDUCATION

Indiana University, Bloomington, IN   **Dec 2020**
B.S. **Computer Science** | *Specialization* **Data Science** | *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, Multivariable Calculus, Database Management Systems, Functional Programming

TECHNICAL SKILLS

Programming:	Java, Python, C, C#, C++, HTML5, CSS3, JavaScript, SQL (MySQL, SQLite), NoSQL (MongoDB), PHP, R, Swift
Frameworks/Libraries:	Django, React, Struts, Codeigniter, Flask, OpenCV, webRTC, ExpressJs, Numpy, NLTK, Tkinter, pandas, GraphQL
Software Engineering:	Data Structures, Object-Oriented Programming, REST APIs, Unit Testing (JUnit), MVC Pattern, VCS
Tools:	Visual Studio Code, Linux, IntelliJ, Android Studio, Unity3d, XCode, RStudio, Jupyter Notebook, heroku, git, Apache Tomcat, MySQL Workbench, XAMPP, phpMyAdmin, Cloudflare Workers

WORK EXPERIENCE

Luddy SICE (UROC), Indiana University, Bloomington, IN *(Research Assistant)*   **Jan 2020 - May 2020**
- Built a dataset for the project's model from over 100 videos which aimed to understand different quadruped animal actions
- Assisted in annotating 8000 images of 9 different quadruped animals using LabelMe into JSON format
- Effectively explored Convolutional Neural Networks (CNN) to classify the actions of different quadruped animals

JPMorgan Chase & Co. Virtual Internship Experience, United States *(Software Engineer Intern)*   **May 2020**
- Successfully completed the virtual internship program by establishing financial data feeds in Python
- Developed a data visualization tool for traders with React framework and by utilizing JPMorgan Chase's open source tool, Perspective

Trimax IT Infrastructure & Services Limited, Mumbai, India *(Software Engineer Intern)*   **Feb 2018 - April 2018**
- Developed a project to simplify payments by integrating Paytm API with webapp to process online payments using UPI gateway
- Implemented Struts framework in which the Model is a combination Java classes, View uses JSP pages along with struts tag library, and Controllers are Servlet and utilized the Initiate Transaction API to get the transaction token for the Process Transaction API
- Successfully performed unit tests using JUnit testing framework

ThinkJain, Mumbai, India *(Software Engineer Intern)*   **Mar 2017 - June 2017**
- Utilized Django framework, Python and MongoDB to design a server application and client interface for an online job portal
- Collaborated with a team to design the MVC pattern using UML diagrams for the application
- Incorporated features such as filtering jobs based on user preference and session management using middleware
- The job portal successfully managed to register more than 100 people within the first month of its launch

RIIDL Organization, Mumbai, India *(Software Engineer Intern)*   **Nov 2016 - Jan 2017**
- Implemented an Internet of Things based streetlight monitoring system along with LDR sensors for my university to save energy
- Utilized PHP to handle the backend development; made a CRUD utility using the Codeigniter framework and MySQL database
- Slashed electricity cost of the test area by ~20% from executing the project over a period of 2 months

PROJECTS (*All projects on github.com/darshselarka1497*)

- **Expense Manager -** Developed a full-stack expense manager using the MERN stack - utilized React on the frontend, Express as the backend framework and MongoDB as the database for the application *(June 2020)*
- **P2P Video Chat Application -** Implemented a Peer to Peer video chat application using webRTC and node.js by utilizing npm packages like SignalHub to connect the peers, webRTC-swarm and simple-peer to turn the web browser into a peer node *(June 2020)*
- **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 *(May 2020)*
- **Ultimate Tic Tac Toe AI -** Developed a 9x9 version of the popular Tic Tac Toe game using python and programmed 2 AI agents for it by successfully implementing the Monte-Carlo algorithm, and Minimax algorithm along with Alpha-Beta Pruning *(Dec 2019)*
- **Survival RPG -** Developed 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 *(Dec 2019)*
- **Voice Translator App -** Created a real-time voice translating Android application which uses Microsoft Translator API (Azure) to translate the text which is then converted to speech by Google Text-to-Speech API and stores the text in a firebase database on the server *(April 2019)*

LEADERSHIP & EXTRACURRICULAR EXPERIENCE

International Sports Club, Indiana University, Bloomington, IN, United States *(Vice President)*   **Aug 2019 - Present**
- Organized and managed the Futsal World Cup 2019 and various other intramural competitions for the global community comprising around 100+ students and faculty at Indiana University

Serve IT, Indiana University, Bloomington, IN *(Teach IT Intern)*   **Jan 2020 - May 2020**
- Enhanced technical communication and presentation skills by presenting fundamental concepts of Computer Science in front of a classroom of over 30 students on a weekly basis and fostered student learning at Girls Inc, a local non-profit organization

Computer Society of India (CSI) Council, Mumbai, India *(Jt. Technical Head)*   **Aug 2015 - Aug 2017**
- Convened and presented workshops on Machine Learning, Android Development, and Cordova Development in my university for a footfall of over 200 people for each workshop and helped organize the annual intercollegiate festival Abhiyantriki