Jaspreet Singh Marwah

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EXPERIENCE

Complex Systems Lab, IIITD   New Delhi, India
Research Intern   *May 2019 - Dec 2019*

- Collaborated with 11 others as a team to build RecipeDB, a structured repository of 118k+ recipes and 20k+ ingredients from over 22 world regions that facilitates multi-level analysis of traditional recipes (dietary classifications, nutritional profiles, flavor profiles, health assosciations, etc.).
- Compiled, curated, and integrated machine learning datasets.
- Co-first authored a research paper that got published in Oxford University Press' journal "Database".

PUBLICATIONS

"RecipeDB: a resource for exploring recipes", Database, Volume 2020, Oxford University Press, https://www.doi.org/10.1093/database/baaa077

EDUCATION

Durham College   Ontario, Canada
Artificial Intelligence Analysis, Design and Implementation (graduate certificate); CGPA 4.85/5   *2021 - Present*

Indraprastha Institute of Information Technology, Delhi   New Delhi, India
Bachelor of Technology in Computer Science and Applied Mathematics; CGPA 7.03/10   *2017 - 2021*

Relevant Courses: *Artificial Intelligence, Machine Learning, Data Mining, Big Data Mining in Healthcare, Advanced Programming*

PROJECTS

RecSys   *Sept 21 - Dec 21*

- A recommender system that suggests job descriptions/resumes based on search terms or a JD/resume document.
- Pre-processed the dataset (200k+ files) and implemented word embedding techniques (TF-IDF and BoW). **(Python, scikit-learn, nltk)**

AI Driven Privacy Quantifier - Privosa (Link)   *Feb 21 - Apr 21*

- An interactive A.I. driven project that judges you based on your Twitter history to raise awareness on data privacy and data rights.
- Developed an NLP-based algorithm that collects and analyzes users' tweets in order to assign labels to the users that most accurately describe them. **(Python, Empath)**

Interactive 2D Fractal Generator (GitHub)   *Sep 20 - Dec 20*

- Generates a 2D IFS fractal based on inputs entered by users through a GUI menu. **(C++, OpenGL, GLFW, Dear ImGui)**

Escaping by Nightfall (Link)   *Jan 20 - Jun 20*

- A 3D action-adventure survival game.
- Worked on level design, game strategy and implementation using Unreal Engine blueprints. **(Unreal Engine 4)**

Student Debt Payoff Patterns   *Oct 19 - Nov 19*

- Modelled (Bernoulli process) the patterns in which people payoff their student debts to analyze the success rate of loan repayment. **(R)**

FitSense   *Sep 19 - Nov 19*
- ○ A tool for patrons of a university gym to plan their workout schedule based on predicted values of crowdedness at any given moment.
- ○ Built, tested and tuned various ML prediction models such as decision tree, random forest, SVM, MLP and gradient boosting regression. **(Python, scikit-learn)**

Snake Vs. Block (Github)   *Oct 18 - Dec 18*
- ○ An endless 2D game in which you're a snake that has to collect coins, tokens and powerups while avoiding blocks for as long as possible to get the highest score you can.
- ○ Worked on the movement of game objects, functionality of power-ups/coins/blocks, spawning/de-spawning of game objects and serialization/deserialization among other features. **(Java, JavaFX)**

All-In-One Smart Helmet (Link)   *Jan 18 - Apr 18*
- ○ A helmet accessory linked to an android app that tries to prevent accidents as well as detect and report them to authorities and emergency contacts.
- ○ Programmed an Arduino microprocessor and wrote code to communicate between the device and controller interface. **(Arduino UNO, C++)**

TECHNICAL SKILLS

Languages: Python , C++ , Java , R , SQL

Tools and Technologies: NumPy , Pandas , scikit-learn , matplotlib , plotly , networkx

POSITIONS OF RESPONSIBILITY & EXTRACURRICULAR ACTIVITIES

- ○ Speaker, Annual Symposium on Computational Gastronomy at IIIT Delhi (Dec 2019): Presented findings of the paper "RecipeDB: A Resource for Exploring Recipes".
- ○ Volunteer (animal caretaker) at Sanjay Gandhi Animal Care Centre, Delhi (Jun 2018 - Jul 2018): Helped in the daily caretaking of animals such as dogs, birds, monkeys and peacocks.
- ○ Volunteer at Esya Tech Festival at IIIT Delhi (Aug 2017): Configured and set-up desktops for a LAN gaming tournament and managed crowd flow for a 3-day gaming event called "Pwnd" which had a footfall of 500 people.