Robin Simpson

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Education

Diablo Valley College *Pleasant Hill, CA*
AS in Electrical and Computer Engineering *Expected 2023*
GPA - 3.9

Work Experience

Argonne National Laboratory *Remote - Lemont, IL*
Intern *June 2022 - Aug 2022*
- Developed a standalone application that geolocated and simulated critical infrastructures within any area.
- Utilized deck.gl, cytoscape.js, dash, heroku, and python in order to create a 3D arc and heatmap for datasets.
- Implemented web scraping and manual user input for critical infrastructure mapping.
- **Technical Skills:** Python with Pydeck, NumPy, Matplotlib, Pandas, Git/Gitlab, Heroku, Cytoscape.JS, Deck.GL, JSON, CSV.

Steam Coders *Pasadena, CA*
Assistant Instructor *Feb 2022 - June 2022*
- Instructed computer science topics to students K-12 at schools and online.
- Assisted the main instructor in preparing class syllabus, lesson plans, and course materials.
- Educated students in a 8-16 week programs in both 1-1 tutelage to 20+ students.
- Utilized Python, Java, C++, and Scratch depending on curriculum.
- **Technical Skills:** Python, Java, C++, JS

Projects

Facial and Object Recognition *Sep 2022 - Current*
Project Bracket
- Developed a web application which takes in user camera input or image input that detects faces or images depending on training data.
- Utilizes a React.JS frontend and a Django backend.
- Trained a machine learning model with OpenCV, LabelMe, and TensorFlow.
- **Technical Skills:** Python, JS, OpenCV, TensorFlow, React, Django, Git

3D Visualization of DOE 16 Critical Infrastructures *Jun 2022 - Aug 2022*
Argonne National Laboratory
- A web application that scrapes and geolocates data regarding critical infrastructures with/without a set scope.
- Data is mapped via arcs or a heatmap with respective legend.
- Features a unity 3D simulation developed in C# that exhibits infrastructure connections.
- **Technical Skills:** Python, Deck.GL, Cytoscape.JS, Heroku, Unity, C#, Pandas, Matplotlib, Gitlab

teachmetw.github.io *2021 - Present*
Self Project
- Showcase of works and projects with images, videos, and explanations.
- Features info, resume, projects, and contact information.
- **Technical Skills:** HTML, CSS, JS

SQL Remake
PCC
- App that creates databases from scratch or read existing txt files in SQL format.
- Reads SQL commands from file or user input.
- Utilized data structures that were built from scratch such as maps, tokenizers, parsers, queues, trees, etc.
- **Technical Skills:** C++, Git, CMake, Build

Skills

Programming Python (Pandas, PyTorch, NumPy, Scikit-learn, TensorFlow, etc.), C/C++, HTML/CSS, JavaScript, SQL, Git, VSCode
Miscellaneous CNC, CAD/CAM, Autodesk, HAAS Milling/Router/Lathe, 3D Systems and Modeling, SketchUp, AutoCAD

Other Experiences

Project Bracket
Project Dev Lead
- Led a team of up to 15 developers to create projects in a variety of topics such as AI and Machine Learning.
- Utilized Git and Github for team development coordination and management.
- Developed under a 16-week deadline for a final deliverable that is showcased.

CFYF
Lead/Officer
- Assist students in preparing a path in CS/E via workshops on a weekly basis.
- Host resume reviews, project creation, leetcode, and interview prep.
- Educate in networking and provide resources to aspiring developers.

DVC Google Dev and Hacking Club
Member
- Developed programs and attend hackathons in a team of 4 or less.
- Attend development workshops such as Mobile Development via Android Studio and Node.js

MESA
Tutor/Member
- Tutor students in Math (Calc to Discrete), Sciences (Chem and Phys), and CS.
- Volunteer for the MESA community and events, and attend AEW Workshops.

GCC/CSUN/CMHS
Student
- NIMS Certification in CNC CAD/CAM, Milling, and Lathe.
- Operated HAAS Super Mini Mill 2, HAAS DS-30y, Lathes, CNC Router.
- 3D Engineering Systems: Makerbot 3D, Formlabs 3L, Createbot F1000.

Other Projects

UniLinked
MakeUC Hackathon
- Utilized Django to develop a web chat app under 36 hours.
- Coordinated project design with 3 other participants.
- Developed both front and backends.
- **Technical Skills:** Python Django, Heroku, PostgreSQL, Git

OnlyBikes
TigerHacks Hackathon
- Utilized Django, Auth0, Twilio, and Tensorflow to develop a bike rental and recognition app under 48 hours.
- Coordinated project design with 2 other participants.
- Developed mainly the backend and machine learning models.
- Trained SSD Mobile Net model with images of 500 bikes and custom labels for 150000 iterations.
- **Technical Skills:** Python Django, Tensorflow, Auth0, Twilio, Heroku, PostgreSQL, Git, OpenCV

References available upon request.