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EDUCATION

B.S COMPUTER SCIENCE

DECEMBER 2022

California State University Dominguez Hills GPA: 3.84 Dean's Honor List: All Semesters

Relevant Coursework

- Dynamic Web Programming, Discrete Mathematics,
- Computers and Society, Assembly, and Intro to Organization,
- Programming Languages, Data Structures, Computer Organization
- Foundations of Higher Mathematics, Operating Systems
- Probability and Statistics, Software Engineering, Analysis of Algorithms
- Artificial Intelligence, Computer Graphics, Compiler Construction I

A.S MATHEMATICS

Fullerton College

Relevant Coursework

- Intro to C++, Data structures in C++, Java Programming,
- Ethical Hacking, Calculus I & II, Multivariable Calculus,
- General Physics I & II, Linear Algebra & Differential Equations

RESEARCH INTERESTS

ARTIFICIAL INTELLIGENCE | ACCOUNTABLE AI | DATA JUSTICE | HUMAN-COMPUTER INTERACTIONS ALGORITHMIC BIAS MITIGATION | DATA ACTIVISM/DATA JUSTICE | HACKTIVISM | DEEP-LEARNING BIG DATA AND DATA PRIVACY | ALGORITHMIC BIAS MITIGATION | ETHICAL AND ACCESSIBLE IT NATURAL LANGUAGE PROCESSING | COMPUTER VISION | DIGITAL ACCESSIBILITY | GENERATIVE AI

CONFERENCE PRESENTATIONS

- 2023 37th Annual CSU Statewide Student Research Competition
- 2023 18th Annual CSUDH Student Research Conference
- 2022 47th Annual CSU, SSRIC Social Science Student Symposium

AWARDS & ACOMPLISHMENTS

- 2023 1st place session winner at CSUDH's 18th Annual Student Research Conference. "Higher Education and the Automation of Inequality: Survey Study"
- 2022 OUR Spring Undergraduate Student Research Award (Research Grant)
- 2021-22 Dreamers Scholarship Recipient
- 2021-22 CSUDH General Scholarship Recipient
- CSUDH Tau Sigma National Honor Society member
- 2019 National Cyber League, Cyber Skyline Competition Participant
- 2013 Hispanic Education Endowment Fund Scholarship Recipient

RESEARCH & RELEVANT PROJECTS

Toro UnScholar Research Program

CSUDH Fall 2021 | Research Methods Course Advisor: Dr. Joanna Perez

- Research design, methods, and implementation semester course.
- Development of comprehensive research project proposal.
- Collaborative-Institutional-Training-Initiative (CITI) certification.
- Research project proposal symposium presentation.

Higher Education and The Automation of Inequality through "Inattentional Blindness": Survey Study CSUDH Spring 2022 | Undergraduate Research Project

Advisor: Dr. Katy Pinto

- Quantitative survey study that examined if "inattentional blindness" can also be observed among Computer Science/Technology graduate and undergraduate students attending a Hispanic Serving Institution (HSI).
- The survey questionnaire was validated and approved by the CSUDH Institutional Review Board (IRB). Subjects were identified and recruited using a snowball sampling method.
- Collected demographic data such as *class standing, major, gender, race & ethnicity,* etc. And ordinal data in the form of statement rankings from two different categories: (i) *Technical and Economic* considerations of technology and (ii) *Sociological and Ethical* ones.
- Data was collected, categorized, and coded using the Alchemer survey platform and then analyzed using the IBM Statistical Package for the Social Sciences (SPSS) software. Data analysis included a parametric pilot Factorial Repeated Measures Analysis of Variance (ANOVA) and non-parametric statistical tests: a Friedman's ANOVA, and Wilcoxon Signed-Rank and Man-Whitney tests, to determine the significant cause and effect relationships.
- Results indicated that students in the Computer Science/Technology fields attribute a greater overall significance to *technical and economic* considerations in comparison with *social and ethical* ones. A compelling indication of *"inattentional blindness"*.

Siamese Neural networks: Face Recognition app

Spring 2022 | Personal Project

- Implemented a deep learning network-based face recognition lightweight application based on One shot learning principle.
- Code implementation of "Siamese Neural Networks for One-Shot Image Recognition" research paper.
- TensorFlow, Jupyter, Keras, OpenCV

Racial Facial Recognition Model: Reducing Racial Bias by Information Maximization Network

CSUH Fall 2022 | Undergraduate Computer Science Senior Research Design Project Advisor: Dr. Liudong Zuo

- Obtained access to datasets BUPT-GlobalFace, BUPT-GlobalFace, Racial-Faces-in-the-Wild (RFW) through Mei Wang at the *Beijing University of Posts and Telecommunications*. Then processed images in sets through the MATLAB Data-ImageStores to label data and used MTCNN for face detection.
- MATLAB Deep-Network Designer Implementation of Information Maximization Adaptation Network (IMAN), a promising Unsupervised Domain Adaptation (UDA) approach that addresses racial bias in Deep-learning based Face Recognition systems through transfer recognition knowledge from the "Caucasian" race category as source domain and other races as target domains.
- Implemented IMAN architecture consisting of Source and Target CNN with shared weights, a ResNet-34 backbone, an MMD estimator on the last two fully connected layers, and SoftMax as source classification loss.

Web Scrapper Python Script Natural Language Processor Spacy

2023 | Project Collaboration with CSU Chancellors office

- Designed and built a Python script that utilized Requests and BeautifulSoup libraries to first scrap and parse Career-Listings dynamic content from the careers.calstate.edu website.
- Performed statistical analysis on the HTML page-tags structure and text format to create a data pipeline to process the unstructured text.
- Incorporated the spaCy Natural Language Processing (NLP) model to process unstructured text utilizing Rule-Based Matching, Part-of-Speech Tagging, Tokens, Lemmatization, and Named-entity Recognition to obtain information needed from each listing across all CSU Campuses.

PROFESSIONAL EXPERIENCE

FREELANCE SOFTWARE DEVELOPER

2023 – Current

- Developed custom Python scripts to collect data from dynamic websites, and automated data pipelines for data extraction, cleaning, and storage.
 - Analyzed HTML and CSS code to locate, and identify relevant data, and used web scraping tools such as Beautiful Soup and Scrapy to extract data.
 - Applied Natural Language Processing to process unstructured text, ensuring data accuracy and quality.
- Collaborated with VCI Construction LLC's GIS Dept. to develop and deploy geoprocessing Python scripting tools and toolboxes that utilize ArcGIS Pro and ArcPy to carry out spatial data geocoding management and analysis.

BUSINESS ADMIN/MANAGEMENT

C&S Solutions | www.solutionscs.net

2020 - Current

- Responsible for administrative operations of my family's small business that provides Residential & Rental Cleaning services, as well as Land/ Debris Clearing Skid Steer Rental services.
- Designed and maintain company website and established filing system to support accurate accounting and payroll processing.
- Performed market research to drive business growth and identify opportunities to improve profitability.
- Planned and implemented organizational practices, marketing strategies, and advertising, resulting in increased lead generation.
- Oversees general business administration functions by coordinating day-to-day operations schedule for subcontractors and negotiating/creating specialized service and rental client contracts.
- Adapted business operations for changing demands based on knowledge of industry and market trends, allowing our business expansion into the Vacation Rentals market.

PEER AFTERSCHOOL TUTOR

CFC Peniel, Volunteer | 2018-2020

- Tutored elementary, junior-high, and high-school kids at CFC Peniel, as part of a volunteer afterschool program.
- Developed and taught English lessons for CFC adult English learners and ESL students.

GENERAL OPERATIONS MANGER

Ganbei DBA Toppings pizza | 2016-2019

- Managed daily business operations for a Restaurant for nearly four years.
- Coordinated payroll processing, employee scheduling, supplier payments, and sales cash deposits.
- Created weekly and monthly Food Cost and expense reports.
- Managed inventory control and coordinated supplier deliveries.
- Responsible for employee recruitment, hiring, and training processes.
- Created and implemented marketing strategies for seasonal promotions, floor displays, and operational workflows.

TECHNICAL SKILLS

LANGUAGES: JAVA, PYTHON, C++, ASSEMBLY, HTML, CSS, MATLAB

DEVELOPER TOOLS: ANACONDA, JUPYTER, ECLIPSE, VISUAL STUDIO CODE, AMAZON AWS, GIT, GOOGLE COLAB, BLENDER, MATLAB DEEP LEARNING TOOLBOX

LIBRARIES: PANDAS, NUMPY, MATPLOTLIB, TENSORFLOW, KERAS, SPACY, ARCPY, ARCGIS, BEAUTIFULSOUP, OPENCV