JIALING WU

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EDUCATION

Dartmouth College *Sep 2019 - Mar to Jun 2021(estimated)*
Master of Science, Department of Computer Science

Dartmouth College *Dec 2016 - Aug 2017*
Joint PhD, Geisel School of Medicine

Shanghai Jiao Tong University (SJTU) *Sep 2011 - Dec 2017*
PhD of Management, School of Media and Communication

Nanjing University of Economics & Finance *Sep 2007 - Jun 2011*
Bachelor of Arts, School of Marketing and Logistics Management

TOOLS & SKILLS

Java, Python, C, JavaScript, Android, Django, Pandas, Scikit-learn, R, HTML, Latex, CSS3, SPSS

WORK & RESEARCH EXPERIENCE

Futurewei Technologies INC. *June 2020-Sept 2020 — Framingham, MA, USA*
Research Intern at Technology Planning Team *Manager: Jian Li*
 • Design and implement cloud learning guided multi-modal edge data sensing with feature embedding and intelligent decision making for agents with communication difficulty.
 • Develop an energy-driven adaptive data profile and upload system for agents working in the wild.

DartNets Lab *Jan 2020-June 2020 — Hanover, NH, USA*
Research assistant, University Lab *Advisor: Andrew Campbell*
 • Apply Photoplethysmogram(PPG) raw signal to measure participants' stress level. Integrated 1D-Conv CNN and LSTM models to classify stress and resting states. Achieved 75% prediction accuracy with small sample input.
 • Successfully launched a long-term(more than 2 years) experiment on first-year college students and collected their passive sensing data. Construct networks and hidden markov model to predict students' stress level change.

The Center for Technology and Behavioral Health *Nov 2016-Aug 2017 — Lebanon, NH, USA*
Research scholar, University Lab *Advisor: Lisa A. Marsch*
 • Merged data from different channels (EMA, MRI scanning, sensors of smartphone and wristband, Amazon Mechanical Turk) to model the ontology of self-regulation.
 • Automatically recorded and predicted patients' addictive behaviors instead of self-report.

COMPUTER SCIENCE PROJECTS

Full-Stack Web Development (JavaScript, CSS, HTML, Git, Django, Flask, Fullstack)
Applied HTML/CSS3, javascript(jQuery)/react/redux, Ajax, MySQL,Django and Flask for full-stack web development
 *Developed an Instagram-like web platform using Django. Users can sign-up, log-in/out, post pictures, follow and like others. Accomplished RESTful web service and deployed the system on Heroku.
 *Implemented a chrome extension to organize and classify tabs and store user preferences with server support.

MyRuns (Java, Android, SQL)
Developed an Android app that logs user running data and compares the data in leader-board. Accurately inferred users activity (e.g., walking running) from mobile sensors (e.g., GPS, accelerometers). Facilitated a local SQL database that consistently synced with Firebase cloud to enhance data persistence.

ByeReceipt (Java, Android, SQL)
Designed an Android app that can automatically read receipts using OCR. It used augmented reality to accurately recognize, categorize and analyze your shopping habits without manually recording your daily expense.

Bioinformatics Project (Python, Biopython, PyMol)
Accomplished multiple data structure(BFS, DFS, Dynamic Programming, T-SNE, Louvain modularity, PCA) from scratch to fulfill sequence alignment,residue matching, contact maps, protein structure simulation and etc.

Machine Learning Implementation (Scipy, Numpy, Pandas, SKlearn)
Implemented Naive-Bayes, Decision Tree, Random Forest, KNN, K-means, Gradient descent optimization, and Neural Networks from scratch. High pass in machine learning course.

Security and Privacy (Linux)
Simulated attacks such as the 2018 Meltdown attack against an Intel CPU (X86) and 2014 Shellshock attack that took advantage of a serious vulnerability in the Bash shell.

Tiny Search Engine (Linux, C programming, Shell, Network)
Accomplished a prototype of mini search engine with crawler, indexer, querier and page ranking algorithm in C.

PATENTS & SELECTED PUBLICATIONS

System and methods of multimodal mobile health management for agents with communication difficulty,
Patent under issuing, 07.2020
Social Sensing: Assessing Social Functioning of Patients Living with Schizophrenia using Mobile Phone Sensing,
CHI'20
Mental Health and Behavior of College Students During the Early Phases of the COVID-19 Pandemic: Longitudinal Smartphone and Ecological Momentary Assessment Study, *JMIR,2020;22(6):e20185*
On the Transition of Social Interaction from In-Person to Online during the COVID-19 Pandemic: Predicting Changes in Social Media Usage of College Students based on On-Campus Co-Location from Mobile Phones,
CSCW, 2020, under reviewing
Loop Users in: The Key to Cross-Platform Data Interoperability, *INTERNET, 2020, under reviewing*

AWARDS

President of Dartmouth Chinese Students and Scholars Association(CSSA)	*2020-2021*
Full Scholarship in Computer Science Dept. at Dartmouth College (Graduate Student)	*2019-2021*
National Fund for Outstanding PhD Student Studying Abroad, China	*2016-2018*
National Scholarship for Graduate Student, China	*2012-2013*
First-class Scholarship for Graduate Student in Shanghai Jiao Tong University	*2012-2013*