Jacob Johnson

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Overview

I am a Computer Engineering student interested in a career in hardware/embedded systems design. I am familiar with VHDL and assembly development. I consider myself most fluent in Python, including the NumPy library, due to my academic history in Natural Language Processing/Artificial Intelligence, but I have also used Java, C#, and C. I proudly contributed to five academic publications across the fields of Linguistics and Natural Language Processing during my undergrad and my one-year stint in a PhD program; these are listed below. I am currently completing leveling courses towards my Master's Degree and will resume taking graduate-level courses this Spring. I speak German proficiently and Spanish at a beginner level.

Education

M.S., Computer Engineering (GPA 4.0)   Weber State University, Fall 2024 - Spring 2027
Courses Include: ECE 3610 "Digital Systems", ECE 3710 "Embedded Systems", ECE3210 "Signals and Systems"
Planned (Spring 2026) Courses Include: ECE 6210 "Digital Signal Processing"
Recipient of an *ECE Department Service Scholarship* for implementing homeworks into an in-house online LMS.
Incomplete Ph.D., Computer Science (GPA 4.0)   University of Utah, Fall 2023 - Spring 2024
Ended the program early to change topic of interest
Courses Include: CS 6350 "Machine Learning", CS 6150 "Graduate Algorithms"
B.A., Linguistics + Computer Science Minor (GPA 4.0)   University of Utah, Spring 2020 - Spring 2023
University of Utah College of Humanities Research Award and *Allan A & Renee Wright Hagander Book Award* recipient
Courses Include: CS 5340 "Natural Language Processing", CS 6390 "Information Extraction (from text)", LING 5300 "Computational Linguistics", CS 6353 "Deep Learning"

Work Experience

Math/CS tutor for Athletes at Weber State University (20hrs/wk)   August 2025 – Present
I tutor student atheletes on topics in Math/Computer Science courses.
Cashier at Smiths Food and Drug (40hrs/wk)   August 2024 – Present
I manage a self checkout aisle and assist customers.
Training Data Labeling Intern at FamilySearch (20hrs/wk)   May 2024 – August 2024
I meticulously labeled detailed historical documents for use in AI training.
Research Assistant at University of Utah (40+hrs/wk)   May 2023 – May 2024
I researched NLP with local and remote colleagues and published one paper on my findings.
Teaching Assistant at University of Utah (20hrs/wk)   August 2021 – May 2023
I taught students in a range of undergrad/grad CS courses through labs, feedback, and help hours.
Assistant Aquatics Director at Camp Tifie, BSA (40+hrs/wk)   June 2021 - July 2021
I maintained pool equipment and supplies, taught swimming and water rescue skills, and lifeguarded.
Production+Picking Team Member at Loftus International (40hrs/wk)   May 2020 – March 2021
I assembled products and prepared orders for shipping.
SolidWorks Designer at Epiroc (10hrs/wk)   November 2019 – April 2020
I designed and modeled mining drills in SolidWorks CAD format.
SolidWorks Designer and Machinist at Clean Machine (40hrs/wk)   January 2016 – September 2017
I translated paper drawings of acquired IP into SolidWorks CAD format and operated CNC mills and lathes.

Academic Publications

"An Investigation of the Relationship Between Perceptual Sensitivity and Word Learning Performance for the Hindi Voiced Unaspirated Dental-Retroflex Contrast by English Speakers" (PSLLT 2024) - I contributed to developing the participant interface for online data collection in the preliminary experiments
"Online Learning of ITSL Grammars" (SCiL 2024) - I developed, implemented, and evaluated an algorithm for learning ITSL languages
"How much Consistency is your Accuracy Worth?" (BlackBoxNLP@EMNLP2023) - I developed a measurement to compare consistency of AI models' at different levels of accuracy.
"Evaluating a Phonotactic Learner for MITSL-(2,2) Languages" (SCiL 2023) - I implemented and evaluated the MITSL2IA learning algorithm for learning $MITSL_2^2$ languages
"The Effects of Exposure and Explicit Stereotypes on Veracity Judgments of Polish-Accented English Speech: A Replication and Extension of Boduch-Grabka & Lev-Ari (2021)" -I substantially contributed to developing the participant interface for data collection in an online study