Daniel Koronthaly

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EDUCATION

Western Washington University	Bellingham, WA
Master of Science in Computer Science (3.88 GPA)	*Sept. 2023 – June 2025*
Western Washington University	Bellingham, WA
Bachelor of Science in Computer Science, Minor in Mathematics (3.94 GPA)	*Sept. 2020 – Dec. 2022*
Central Washington University	Ellensburg, WA
Running Start classes for Junior and Senior years of high school (3.92 GPA)	*Sept. 2018 – June 2020*

EXPERIENCE

Member of Technical Staff Intern June 2022 – Sept. 2022
VMware *Bellevue, WA*
- Worked as part of the CloudHealth Secure State team (now VMware Aria Automation for Secure Clouds)
- Fixed a security flaw in an existing Bash script by adding support for OAuth token exchange
- Used Go to implement AWS Lambda to process customer requests to enable real-time updates on their account
- Implemented unit tests, performed end-to-end integration testing, configured alarms, and created a service dashboard to monitor service health

Software Developer Intern January 2023 – April 2023
Costco *Issaquah, WA*
- Interned in the Enterprise Service Integration team, which is responsible for pipeline configuration
- Worked on utility to list expiring client secrets in Azure Active Directory
- Obtained certificate AZ-900: Microsoft Azure Fundamentals

Graduate Research Assistant & Teaching Assistant Sept. 2023 – June 2025
Western Washington University *Bellingham, WA*
- Worked as researcher in NEAT (Next-Generation Effective Affective Technology) Research Lab
- Recreated Heroku codebase in Microsoft Azure to fix Garmin smartwatch GPS and heart rate collection
- Wrote Python scripts to fully replace statistical analysis tools present on leading qualitative analysis software
- Created a data pipeline that merged citation files, geographical location data, and qualitative code spreadsheets

PROJECTS

Grapheme to Phoneme Transformer Model | *PyTorch, PyTorch Lightning* | GitHub Link Winter 2025
- Created a deep learning model that outputs a sequence of phonemes for each given string
- Created custom tokenizer to transform input characters to index tensors with fixed length
- Used now-fixed length to parallelize/batch model processing using PyTorch Lightning framework
- Constructed custom transformer stack with positional encoding, decoder, and encoder
- Integrated with Discord API to create a hobby text-to-speech bot

Habit Healer | *React Native, JavaScript, Firebase Realtime Database (NoSQL)* | GitHub Link Winter 2024
- Developed multiplatform iOS + Android mobile app for helping people to stick to self-specified habits
- Created data model that accounts for habit categorization and allows platform-specific time selection per habit
- Integrated Firebase Authentication and Firebase Realtime Database (for persistence between different devices)
- Developed component structure for other group members to build new pages easily

CERTIFICATIONS

AZ-900: Microsoft Azure Fundamentals (Granted April 12, 2023)

SKILLS

Languages: Python, Java, C, C++, Kotlin, MATLAB, React, React Native, SQL
Areas of Focus: Human-Computer Interaction and Machine Learning
Libraries: pandas, numpy, PyTorch, matplotlib
Fluent In: English, Slovak

Scholarships/Awards

Academic Awards
- Western Washington University Admissions Achievement Award ($4,000.00)
- Western Washington University Admissions Annual Scholarship ($2,000.00)
- Arlan Norman Award, granted to graduate advisor Dr. Moushumi Sharmin ($8,500.00)

Publications

Current/Under Review Publications
- **Daniel Koronthály**, Adrian Heffelman, Hamza Magsi, Wilson Zuber, Moushumi Sharmin, Shameem Ahmed. *The Co-Evolution of Language, Technology, and Culture in Autism Computing Research*
- **Daniel Koronthály**, Selah Bellscheidt, Dion Udokop, Yasmine N. Elglaly. *"Mama Llama! You Came Back!": Designing for Gestalt Language Processing in a Case Study of an Autistic Child*
- Keagan Edwards, Wil Zuber, Adrian Heffelman, **Daniel Koronthály**, Hamza Gul Magsi, Moushumi Sharmin, Shameem Ahmed. *Understanding Misaligned Objectives in Autism Technology Research: A Review of Literature from IEEE Xplore*
- Jamey Albert, **Daniel Koronthály**, Samantha Dobesh, Zafir Nasim, Ilaana Khan, Shameem Ahmed, and Moushumi Sharmin. *To Aid Emotion Expression for Non-Verbal Autistic Individuals, In an App, Less (Features) is More (Better)*