Alexander Chernous
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EDUCATION

Honours Bachelor of Science at University of Toronto, St. George Campus

- Majors in Computer Science and Linguistics

TECHNICAL SKILLS

- Programming: Python (including NLTK), Java, basics in C/C++
- Web: JavaScript/jQuery, React, Bootstrap, Node.js, CSS, REST
- Markup
    - State Chart: SCXML
    - Web: HTML
    - Grammar: GRXML, GSL
- Database: SQL
- Version Control: Git
- UX Speech/Digital Design: XMind, Visio
- Agile software development methodology
- Basic machine learning understanding

RELEVANT WORKPLACE SKILLS

- Punctual, organized, adaptive, detail oriented
- Strong problem-solving skills
- Cooperative with staff and clients
- Able to work individually or in a team setting

WORK EXPERIENCE

Application Developer / UX Conversational Designer at [24]7.ai July 2019++

- As part of a full stack architecture for digital chat bot applications:
    - Developed SCXML applications
    - Built backend functionality in Node.js
    - Wrote test cases in Mocha.js
    - Maintained existing applications
- Collaborated with Data Scientists, UX Conversational Designers, and clients to create said applications
- Covered responsibilities pertaining to UX Conversational Design – outlined on the next page

References upon request

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UX Conversational Designer at [24]7.ai July 2018-July 2019

- Designed logic decision trees (in XMind and Visio) to represent natural language conversations between chat bots and users
- Implemented and discovered best practices of human-computer interaction based on human psychology and cognition (e.g. Grice's maxims, cognitive load)
- Worked with software developers and data scientists to translate decision tree designs into finite state machine chatbot applications (SCXML)
- Wrote natural language grammars (in GRXML/GSL) to accurately match user input for IVR applications
- Maintained SQL databases
- Put together analytical reports, for clients, of the company's product solutions – gave insights on potential improvements/optimizations
- Worked closely with multiple fortune 500 clients to create chat bot design solutions for their businesses – led and scheduled meetings, presented ideas, and demonstrated designs
- Attended UX Design Leadership conference: https://designleadership.io/

E-Classroom Victoria University in the University of Toronto Jan 2014-May 2018

- Assisted students with any computer related issues (i.e. troubleshooting)
- Monitored activities of students in the electronic classroom lab for designed use of computer equipment
- Upheld a neat classroom environment and preserved equipment functionality

VOLUNTEERING

North York Community House 2011-2012

- Educated elderly individuals in computer technology to stay connected with their family and friends

PERSONAL PROJECTS

Natural Language Prediction in Python 3.7.2

- https://github.com/alexchernous/NaturalLanguagePrediction
- Used Markov Model theory to implement n^{th} order Markov Chains for single word predictions, sentence generation, and sentence completion
- Trained n-gram word models, from literature, for prediction algorithms (free literature resource: https://www.gutenberg.org/)
- Wrapped the program in a simple GUI (tkinter)

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UNIVERSITY PROJECTS

Team Project; Software Engineering at UofT

- Collaborated with six members to develop a time management application for students
- Coded frontend and backend components in Java (Android Studio)
- Google Firebase API was used to implement user data storage
- Applied Agile development cycle to efficiently divide workload and complete tasks on time
- Utilized Git/Github version control to contribute to the project and maintain code

Individual Project(s); Computational Linguistics at UofT

- Implemented the Lesk algorithm to correctly assign sense meaning to nouns in a sentence of a given string (Python/NLTK - WordNet)
- Used the Hearst algorithm to search through a given corpus and find hyponym-hypernym relations between nouns in each sentence (Python/NLTK - WordNet)

Individual Project(s); Natural Language Processing at UofT

- Sentiment analysis in Python. Analyzed tweets (Twitter) on a positive-negative scale with the use of WEKA.
- Rudimentary Speaker Identification and Speech Recognition in MATLAB using Gaussian Mixture Models and Hidden Markov Models respectively.

References upon request