Victor Ardulov

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EDUCATION

University of Southern California

Doctor of Philosophy, *Computer Science* — August 2017 - May 2022
Master's of Science, *Computer Science* — August 2017 - December 2018

University of California, Santa Cruz

September 2013 - June 2016
Bachelor's of Science with Honors, *Computer Engineering - Robotics and Control Systems*

SKILLS

- **Programming:** Python, C, JavaScript
- **Tools:** AWS (EC2, S3, Lambda, DynamoDB, SageMaker), Git (Github, GitLab), Docker, Jupyter, Conda
- **Frameworks:** PyTorch, Tensorflow, Keras, Sci-kit Learn, HuggingFace
- Expertise in Deep Learning, Computer Vision, Natural Language Processing, Language Modeling, Multi-modal Modelling, Automatic Speech Recognition, Dynamical Control Systems
- **Languages:** English (Native), Russian (Fluent)

EXPERIENCE

Amazon Web Services

Applied Scientist II, Los Angeles, CA — August 2022 - *Present*

- Developed and applied novel methods to utilize text-only data to train and improve medical domain Automatic Speech Recognition leading to a 5 - 10% improvement in performance
- Delivered improvements to both dictation and conversational ASR across 4 production deliveries
- Experimented with combining 3 different text generation methods with utilize Text-to-Speech to improve ASR

CalypsoAI

Co-founder, Chief Scientist, San Mateo, CA — September 2018 - September 2022

- Designed the first technical road-map for initial products during fund-raising
- Implemented prototypes for 4 product iterations including Python package interface and REST API for machine learning model analysis
- Managed 4 applied scientist distilling scientific developments into products and features leading
- Conducted research into to ensure and measure model robustness and data cleanliness leading to 2 patents

Signal Analysis and Interpretation Lab

Research Assistant, Los Angeles, CA — August 2017 - May 2022

- Studied applications of Natural Language Processing and multi-modal learning techniques to study human behavioral interaction from speech and language
- Applied reinforcement learning policies to optimize robust adaptive diagnostic evaluation of neurodevelopmental disorders leading to 36 - 130% improvement over relevant baselines
- Mentored and managed undergraduate and graduate students in the execution of research agendas

HRL Laboratories LLC

Research Software Engineer, Malibu, CA — October 2016 - September 2018

- Experimentally validated mathematical frameworks for improved dynamics analysis for systems-of-systems
- Designed experimental framework to evaluate reinforcement learning for complex multi-agent cooperation with hindered communication
- Built a language analysis pipeline to convert natural language questions into system queries that would facilitate human-AI collaboration leading to a patent

Full list of publications and patents available upon request