

# Dhruv Vyas

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## INTERESTS

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Machine Learning, Deep Learning, Data Analytics, Healthcare Systems, Signal Processing, Embedded Systems, Internet of Things

## SKILLS

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- **Programming:** Python, Java, Swift, SQL, C, C++
- **Cloud:** GCE, AWS
- **Tools:** TensorFlow, PyTorch, Jupyter, Weka, MATLAB, Android Studio, XCode

## EXPERIENCE

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<b>Postdoctoral researcher, University of Iowa</b> <i>Leveraging applied ML and modern technologies in the field of audiology and hearing-related diagnostics and treatments</i>	Iowa City, IA Jan 2023 - present
<b>Graduate Research Assistant in Mobile Systems Lab, University of Iowa</b> <i>Developing software tools to gain insights into the effectiveness of hearing aids and their impact on individuals' experiences</i>	Iowa City, IA Jan 2017 - Dec 2022
<b>Data &amp; Operations Research Scientist Intern, Principal Global Investors</b> <i>Creating data standardization tools empowering the company's data science team</i>	Des Moines, IA May 2020 - Aug 2020
<b>Sr. Embedded System Engineer, Archana Automation</b> <i>Designing and developing company's HMI based automation products</i>	Junagadh, India Jan 2014 - Jul 2016

## EDUCATION

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<b>University of Iowa</b> <i>Doctor of Philosophy in Computer Science</i>	Iowa City, IA Aug 2016 - Dec 2022
<b>Birla Institute of Technology and Science - Pilani - Goa Campus</b> <i>Master of Engineering in Embedded Systems</i>	Goa, India Aug 2011 - Aug 2013
<b>Dharmsinh Desai University</b> <i>Bachelor of Engineering in Electronics Engineering</i>	Gujarat, India Jul 2007 - May 2011

## PROJECTS

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- Evaluating auditory outcomes using smart glasses, watches, and phones: (Python, Multi-modal Machine Learning, Data Analysis, Signal Processing)
- Personalization of Over-The-Counter Hearing Aids: (NodeJS, Python, Machine Learning, Reinforcement Learning)
- Context Sensitive Audio Sense: mEMA (mobile Ecological Momentary Assessment) for evaluating hearing aids and predicting user success: (Java, Swift, Machine Learning, Android Programming, iOS Programming)
- Kiosk App for Over-The-Counter Hearing Aid Research: (Android Programming, Signal Processing)
- Social Network Communication Analysis of Middle School Students: (Python, NLP)
- Record and Replay System for Real-Time Operating System: (Zephyr OS, Real-time OS, C)
- PHASER - A phase shifting antenna for low powered directional communication: (C, Wireless networking, Antenna designs)

## MISCELLANEOUS PROJECTS

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- **Qemu RPi Kernels: (Qemu, Virtualization, Kernal building)**
  - Github repo: [dhruvvyas90/qemu-rpi-kernel](https://github.com/dhruvvyas90/qemu-rpi-kernel) | 1.9k stars
- **RPi libmodbus: (C, Python)**
  - Github repo: [dhruvvyas90/libmodbus](https://github.com/dhruvvyas90/libmodbus) | 24 stars
- **EV Charging Station Kiosk: (Python, AWS, RaspberryPi, Arduino, C)**

## MISCELLANEOUS

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- Active participant in UIowa's Device Advice (2019-2021) student organization, dedicated to educating senior citizens about contemporary technologies
- Active member of Raspberry pi stack-exchange community