DANIEL A FARONBI

danielfaronbi@gmail.com

SUMMARY

Dedicated to the combination of music and technology, Daniel seeks innovated solutions to problems in both fields.

WEBSITES, PORTFOLIOS, PROFILES

- https://danielfaronbi.com/
- https://www.linkedin.com/in/daniel-faronbi-7aa61b184/
- https://github.com/dafaronbi

SKILLS

- Python, C++,C, Java, Java Script, Kotlin
- Machine Learning/Deep Learning
- Digital Signal Processing,
- Computer Vision, Music Information Retrieval
- Embedded system development: ARM, AVR, and PIC microcontrollers.
- Linux and Minix Kernel Knowledge
- Front and Back end web development (java script, node js, django)
- PCB design with Eagle Cad and OrCad
- Serial communication protocols: SPI, I2C, UART
- Electronic Circuit Design: amplifiers, voltage regulators, current sources
- Electrical skills with Logic Analyzer usage, Multisim, Oscilloscope usage, Soldering
- Production in Ableton Live, FL Studio, Max MSP, and Pro Tools

EXPERIENCE

PHD Student / New York University - New York, NY *08/2021 - Current*

Assisting various research projects in NYU's Music and Audio Research Laboratory (MARL). This includes personal projects focused on automatic synthesizer programming, work on updating Librosa (an MIR python library), work on the MARL's S3D projects, and work in the Critical Sonic Practice Lab.

ATG Intern / Dolby Laboratories - San Fransico, CA *06/2023 - 09/2023*

Audio research as part of the Advanced Technology Group (ATG). Worked on applications for streaming Dolby Atmos audio for collaboratively mixing audio.

Machine Learning Engineering Intern / Bose Corporation - Farmingham, MA *06/2022 - 08/2022*

Worked on projects including environmental sound based compositions, source separation for speech, music, and sound effects, and evaluation techniques for deep RMS noise estimators.

Research Assistant (Operations Research) / University Of Nebraska At Omaha - Omaha, NE *08/2020 - 05/2021*

Research Assistantship of NSF funded project through the mathematics department at UNO. The research is focused on implementation of multidimensional search algorithms for linear programming with applications in the fields of machine learning or data science.

Wearable Computing REU / Washington State University - Pullman, WA *05/2020 - 08/2020*

One NSF's prestigious Research Experiences for Undergraduates (REU) programs. The research focused on using DSP and machine learning techniques to classify stressed and unstressed regions in a variety of biometric signal data. The classifications of these signals were used to indicate the likelihood of alcohol relapse.

Engineer Intern / ScanMed LLC - Omaha, NE *07/2019 - 08/2020*

Computer vision and machine learning work centered at creating automated diagnosis for prostate. Embedded microcontroller development for controlling MRI coils.

Media Support Engineer / Boys Town National Research Hospital - Omaha, NE *02/2018 - 12/2018*

Provided audio and visual support for a variety of experiments at Boys Town National Research Hospital.

Network Engineer Intern / Union Pacific - Omaha, NE *06/2017 - 12/2017*

Provided server connectivity for Union Pacific's network applications using CISCO IOS to configure switches and routers and editing pearl scripts used to generate DNS configurations.

EDUCATION AND TRAINING

Ph.D.: Music Technology
New York University - New York, NY

Bachelor of Science: Computer Engineering *05/2021*
University of Nebraska At Lincoln
GPA: 3.658

Bachelor of Arts: Music Technology *05/2021*
University of Nebraska At Omaha
Minor: Mathematics
GPA: 3.658

ACTIVITIES AND HONORS

UNO Walter Scott Jr. Scholarship Recipient
The Walter Scott, Jr. Scholarship Program (Scott Scholars) is the most prestigious scholarship extended by the University of Nebraska system. The scholarship provides complete funding for an undergraduate college experience that includes tuition, room and board, and whole-person learning opportunities. Eligible areas of study include majors within the UNL College of Engineering, UNO College of Information Science and Technology, and other STEM related programs.
UNO Regent's Scholarship Recipient
Full tution scholarship
UNO Honors Program Member
The University Honors Program is an academic learning community. The mission of the Honors Program is to provide an enhanced and supportive learning environment responsive to the educational needs of highly able and/or exceptionally motivated undergraduate students.
IEEE Eta Kappa Nu - IEEE National Honor Society
IEEE-Eta Kappa Nu (IEEE-HKN), the honor society of IEEE, promotes excellence in the profession and in education with ideals of Scholarship, Character and Attitude.It was founded on 28 October 1904 for students of electrical engineering. Today, IEEE-HKN promotes professional accomplishment, service, and development for students and professionals in electrical engineering, computer engineering, and other IEEE fields of interest.

EXTRACURRICULAR EXPIERENCE

National Association of LSAMP Alumni (NALA)
NALA's Vision is to ensure that underrepresented minority students in STEM are prepared to assume leadership roles and professional opportunities. We will foster the career development and transition of our LSAMP students through conferences, workshops, and mentorship. We will do this by developing a network of LSAMP Alumni to shine a brighter future for our current undergraduate students.
Walter Scott Junior Leadership Council
This was a leadership position for high achieving STEM students admitted to the Walter Scott Jr. Scholarship program. We helped revamp the mentorship aspect of the program to include upperclassmen mentoring lowerclassmen. We redesigned the admission process to be more holistic rather than focus on only set academic acieivents. Harvard design thinking methods were used to solve problems.
Prairie STEM Teaching Assistant
Daniel has volunteered for the after school elementary STEM education program, Prairie STEM. In this program, young students are exposed to a variety of engineering projects. They had experience using CAD software to design architecture, mechanics, and circuits. Daniel volunteered as a teaching assistant for these lessons.
Music
Daniel is also an active jazz pianist, music producer, and composer. He has performed for music groups spanning a wide variety of genres and has received both jazz and classical training. He has worked as a studio manager for Studio 381 at the University of Nebraska and has published two albums. He has shared the stage with jazz heavy hitters such as Benny Golson, Bobby Sanibria, Micah Bell, and Dave Stryker and maintains an active performance schedule at various venues in New York City.

RELEVANT COURSES

- 3D Audio
- Audio Recording Techniques I, II, & II | Advanced Computer Music Composition
- Calculus I, II & III
- Communication Systems | Computer Vision
- Data Structures | Deep Learning |Differential Equations
- Digital Design | Digital Synthesis
- Electric Circuits I & III | Electronic Circuits I and II
- Embedded Microcontrollers | Finite Difference Equations
- Fundamentals of Conducting |
- Information Theory | Introduction to Data Science
- Java I and II | Jazz Arranging and Composition
- Psychology of Music
- Linear Algebra | Machine Learning
- Microprocessor Applications
- Microprocessor System Design | Mobile Robotics | Music History I and II
- Music Informatics | Music Information Retrieval
- Music Theory (3 classes) | Operating Systems
- Physics I and II (with calculus)
- Sound Reinforcement | Statistics
- Switching Circuits

PUBLICATIONS

- Faronbi, Daniel, Iran Roman, and Juan Pablo Bello. "Exploring Approaches to Multi-Task Automatic Synthesizer Programming." *ICASSP 2023-2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE, 2023.

- Iran Roman, Daniel Faronbi, Isabelle Burger-Weiser, Leila Adu-Gilmore. "F0 ANALYSIS OF GHANAIAN POP SINGING REVEALS PROGRESSIVE ALIGNMENT WITH EQUAL TEMPERAMENT OVER THE PAST THREE DECADES: A CASE STUDY" *SMC 2023 - Sound and Music Computing Conference 2023 (SMC).*