Andrei Biswas

Musically Enthused Computer Engineer

30 High Street, Unit 34, Medford, Massachusetts, 02155

(+1) 857-928-7243 | axb6972@rit.edu | codeabiswas | andreibiswas | codeabiswas.github.io

Career Objective

To contribute my knowledge of Computer Engineering principles and gain valuable experience through experiential learning. Available from May to August 2019.

Education

Rochester Institute of Technology — *Rochester, New York*

BS in Computer Engineering (Honors Program) with Minor in Music & Technology | ***Cum. GPA:*** *3.64/4.00* | ***C.E. GPA:*** *3.82/4.00* — *Aug. 2016 - May 2021*

- **Awards:** *RIT Founders Scholarship for International Students; Dean's List (Fall 2016, Spring & Fall 2017, Spring & Fall 2018)*
- **Relevant Courses:**
  - *Multivariable Calc.*
  - *Differential Equations*
  - *Discrete Math for Computing*
  - *Linear Algebra*
  - *Probability and Statistics*
  - *Intro. to C.E. w/ Lab*
  - *Digital System Design I and II w/ Lab*
  - *Assembly Language Prog. w/ Lab*
  - *Circuits I w/ Lab and Circuits II*
  - *Computer Science I and II*
  - *Intro. to Software Engineering*
  - *Computer Organization*
  - *Applied Programming*
  - *Electronics I w/ Lab*

The Governor's Academy — *Byfield, Massachussetts*

High School Diploma — *Sept. 2012 - June 2016*

Experience

Analyzing Audio Signals for Machining Monitoring with Support Vector Machine — *Rochester, New York*

Undergraduate Research Assistant at RIT — *May 2017 - Aug. 2018*

- Developed a 50% faster and more accurate real-time monitoring system with a partner which takes sounds produced by different machining processes and labels them according to a classifier created by a support vector machine algorithm.

Grading for Digital Systems Design II — *Rochester, New York*

Grader for the Computer Engineering Department at RIT — *Aug. 2018 - Dec. 2018*

- Checked, corrected and helped with homework and quizzes for the students taking the class.

Projects & Labs

- Exceeded professor's expectations by adding a login system and game observation features in a 5-person team to develop a checkers-game website respecting Agile methodology using Spark with Java, HTML, and JavaScript.
- Created a dependable, backup application using Python that syncs the Google Drive files with any device connected with the computer.
- Programmed a game in mixed C and ARM Assembly Language with user interaction and rules on a FRDM-KL46Z board.
- Programmed a swift AI in Java for a pathbuilding game that could compete against humans as well as other AIs.
- Designed a state-machine and wrote microcode with a partner to develop a fully-functioning multicycle CPU implementation by writing microcode and ROM instructions for an Accumulator Design Instruction Set Architecture.

Skills

Programming	Python, Java, ARM Assembly, C, VHDL, HTML, LaTeX
Software	Altera Quartus, ModelSim, OrCAD PSPICE, Xilinx ISE
Hardware	Oscilloscope, Digital Multimeter
Languages	Fluent in English, Bengali, French and Hindi

Extracurricular Activity

Audio Engineering Society (AES) — *Rochester, New York*

Vice President; President — *Aug. 2017 - May 2018; Aug. 2018 - Dec. 2018*

- Held weekly meetings to discuss, implement, and experiment on audio engineering techniques, track analysis, speaker setups, and Digital Audio Workstations.
- Taught other piano players how to do simple improvisation and capture sound from an acoustic piano.

The Reading Room (Indie Record Label) — *Rochester, New York*

Artist — *Apr. 2017 - Present*

- Composed and played piano on some tracks released under the label.
- Produced and released a track that has currently +60k plays on SoundCloud.

Volunteer: **DASTAK** — *New Delhi, India*

Teacher — *Aug. 2015*

- Taught the English language to girls who were in grade 10 whose mother tongue is Hindi.

Volunteer: **CENSOIFF: ONG Centre Solidarité** — *Abidjan, Ivory Coast*

Teacher — *Aug. 2013*

- Taught the English language to a group of 16 children, aged 7-15, whose mother tongue is French.
- The work attracted a lot of attention and an article was published in a local newspaper.