Title: Final Presentations
Credit: Taught by Professor Mikael Giordi
Draft: 1

FADE IN:

INT. STANFORD CLASSROOM - DAY

The final class has arrived, and the students are excited to present their completed projects. Clyde and Noah are the first to present, having collaborated on a unique and ambitious project.

>   CLYDE
>   (confident)
>   Our project is called "GestuMIDI."
>   It's a gesture-based MIDI controller
>   system that uses computer vision and
>   machine learning to translate human
>   movements into MIDI data.

>   NOAH
>   (excited)
>   We used OpenCV and TensorFlow to
>   process the video feed from a
>   camera, and trained a custom machine
>   learning model to recognize specific
>   gestures and map them to MIDI
>   messages.

>   CLYDE
>   (acknowledging difficulties)
>   One of the challenges we faced was
>   getting the gesture recognition to
>   be accurate and responsive enough
>   for real-time music creation. We had
>   to experiment with different
>   algorithms and techniques to improve
>   the performance.

>   NOAH
>   (adding)
>   Another challenge we encountered was
>   creating an intuitive and flexible
>   interface for users to map their
>   gestures to specific MIDI messages.
>   We wanted to allow for customization
>   while maintaining a simple and
>   accessible user experience.

                    CLYDE
               (demonstrating)
          Now, we'll show you a quick demo of
          how GestuMIDI works. As I move my
          hands, the system recognizes the
          gestures and translates them into
          MIDI messages, which are then sent
          to a software synthesizer to create
          sound.

Clyde performs a series of gestures, and the room fills with
the sounds of his musical creation. The class watches in awe,
impressed by the seamless integration of technology and human
expression.

                    PROFESSOR GIORDI
               (beaming with pride)
          Excellent work, Clyde and Noah!
          You've overcome significant
          challenges to create a truly
          innovative and expressive MIDI
          controller. I'm impressed with your
          dedication and the creative
          application of computer vision and
          machine learning in your project.

As the class applauds, Clyde and Noah feel a great sense of
accomplishment. They have successfully combined their passion
for music and technology to create a unique and inspiring
project that pushes the boundaries of MIDI control.

                    LEE
               (smiling)
          Hello everyone, my project is called
          "AcoustiMIDI." It's a system that
          captures the vibrations of acoustic
          instruments using piezo sensors and
          converts them into MIDI data for
          further manipulation and control.

Lee holds up an acoustic guitar fitted with piezo sensors,
showing the class her innovative design.

                    LEE
               (continuing)
          To analyze the sensor data, I used a
          combination of frequency-domain
          analysis and machine learning
          algorithms. I also utilized existing
          pitch and onset detection libraries,
          as suggested by Professor Giordi.

Lee demonstrates her project by playing the guitar. The class
listens to the acoustic sound blending seamlessly with the
digital MIDI components, creating a unique and captivating

soundscape.

                    LEE
              (acknowledging challenges)
         One of the main challenges I faced
         was achieving accurate pitch and
         amplitude detection in real-time. It
         required a lot of trial and error,
         as well as fine-tuning the
         algorithms to get the desired
         results.

                    LEE
              (adding)
         Another difficulty was designing a
         non-intrusive and easy-to-install
         system for the piezo sensors, so
         they wouldn't interfere with the
         natural sound and playability of the
         instruments. I experimented with
         various attachment methods and
         materials to find the optimal
         solution.

                    PROFESSOR GIORDI
              (impressed)
         Fantastic work, Lee! Your
         AcoustiMIDI project elegantly
         combines the beauty of acoustic
         instruments with the versatility of
         MIDI technology. You've demonstrated
         great problem-solving skills and
         creativity in tackling the
         challenges you faced. Well done!

The class applauds Lee's innovative project, and she beams
with pride, having successfully bridged the gap between
traditional acoustic instruments and the digital world of
MIDI.

After Lee's presentation, Raj, Kate, and Kanjo are next to
showcase their collaborative project. They've created an
interactive MIDI installation that invites the audience to
participate in music creation.

                    RAJ
              (enthusiastic)
         Our project is called "MIDIscapes."
         It's an interactive MIDI
         installation that uses motion
         sensors, pressure-sensitive floor
         tiles, and a custom software system
         to allow users to create music
         through their movements and
         interactions with the environment.

                    KATE
               (explaining)
          We used ultrasonic distance sensors
          to detect the movements of users and
          pressure-sensitive floor tiles to
          capture their footsteps. The data
          from these sensors is sent to a
          Raspberry Pi, which processes the
          information and generates MIDI
          messages.

                    KANJO
               (adding details)
          We developed a custom software
          system using Python and MIDI
          libraries to create a versatile and
          flexible environment for mapping
          sensor inputs to various MIDI
          parameters, such as pitch, velocity,
          and effects.

                    RAJ
               (demonstrating)
          As you walk on the
          pressure-sensitive tiles and move
          within the sensor range, the system
          generates different MIDI sounds and
          effects based on your actions.

The class watches as Raj, Kate, and Kanjo demonstrate their
project. The room fills with music as they move around the
installation, creating an immersive and interactive
experience.

                    KATE
               (acknowledging challenges)
          One of the challenges we faced was
          calibrating and fine-tuning the
          sensors to achieve accurate and
          reliable data collection. We had to
          experiment with different
          configurations and filtering
          techniques to optimize the system's
          performance.

                    KANJO
               (adding)
          Another difficulty was designing a
          user-friendly interface for
          customizing the MIDI mappings and
          settings. We wanted to make the
          system accessible and engaging for
          users of all ages and musical
          abilities.

                    PROFESSOR GIORDI
                (impressed)
            Outstanding work, Raj, Kate, and
            Kanjo! Your MIDIscapes project truly
            captures the spirit of
            collaboration, creativity, and
            exploration that I hoped to inspire
            with this course. You've
            successfully integrated various
            technologies and tackled the
            challenges with determination and
            resourcefulness.

With the final presentations over, Professor Giordi stands in
front of the class, ready to give grades and say farewell.

                    PROFESSOR GIORDI
                (sincerely)
            I am truly impressed by the
            dedication, creativity, and
            innovation each of you has shown
            throughout this course. It's been a
            pleasure to teach you all, and I'm
            proud of your accomplishments.

Professor Giordi hands out the final grades to the students.
They're pleased with their results, having learned a lot
about MIDI and embedded devices throughout the course.

                    PROFESSOR GIORDI
                (cheerful)
            I hope this experience has inspired
            you to continue exploring the world
            of music technology and MIDI. I wish
            you all the best in your future
            endeavors!

Professor Giordi puts on a pair of sunglasses and grabs his
electric guitar. With a sly grin, he strums a powerful chord,
summoning a magical barline that lifts him off the ground.

                    PROFESSOR GIORDI
                (shouting over the music)
            Farewell, everyone! Keep rocking the
            world of MIDI!

The magical barline carries Professor Giordi out the window
as he plays an epic guitar riff. The class watches in awe,
waving goodbye to their eccentric and talented professor.

The students begin to pack up their belongings and say their
farewells to one another, reflecting on the unforgettable
experience they've shared in Professor Giordi's class.

FADE OUT.