<Al via CSP the Pilot Project>

Sandy Marie Romo, M. Ed. Pebble Hills High School, SISD
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The University of Texas at El Paso
National Science Foundation Award # 2206982
<ABOUT ME>

- K-12, 15 years, College Board’s National Faculty, Ambassador/Presenter for Tech Organizations
- AP Computer Science Principles, Digital Media, Marketing, Web Design, Adjunct Faculty EPCC Credentialed Dual Credit Psychology, Dual Credit Education 1300
- Pebble Hills High School, Socorro ISD
- 2 Master’s Degrees, 2 Bachelor’s Degrees, 9 areas of certification with the state of Texas
• **TOPIC and relevance:**
  • **Focus:** Navigating and understanding the influences of artificial intelligence within an evolving educational/global/workforce structure
  • **Why this Matters:** Educational Challenges, Global and Workforce Trends, Careers, etc.
  • **Artificial Intelligence Focused** by means of students working with AI platforms for analysis, comparison and research, followed by programming to create a similar user interface with predictive capabilities.
  • This project is one that I have undertaken on my own as I am tailoring it specifically to my students for my AP Computer Science Principles course. It is a topic that I wished to explore in a more specialized detail.
• **Project Goals:** Engage in the creation of AI learning processes and the influences on the educational, career, and societal impacts.

• **Objectives:** Students will engage in the development of analysis, exploration, creation, and programming of AI tools.
<RELEVANCE OF RESEARCH PROJECT>

- **Focus**: Exploring the elements and influences of AI, as well as the social impacts.
- **My Why**: College and Career Impacts and marketability. Where do students see themselves within the evolving frontiers of the digital world?

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**Articles on AI & Career Impacts**

Due: Friday, August 18, 2023 at 11:59 pm

Part 1: Based on the articles provided on the impacts of AI, provide your insight as to benefits and potential pitfalls of progresses in this area. You will conduct research related to the career fronts touched by AI.

Part 2: Refer back to ChatGPT. Get information from this source related to where AI is slated to go and its impacts on careers in the future. Conduct this as an interview.

Part 3: Create a presentation that outlines where this has been, where it is going, your interview with AI, and your take on the topic. Remember to use real-world examples of careers and highlights from your interview.
• **Topic: AI Meets AP CSP**

• **Connection with research project:** Analyzing, navigating and creating AI programming platforms within the AP Computer Science Principles course. Students will take part in a variety of comprehensive discussions related to the social impacts and the evolution of AI.

• **Types of Learning:** Problem Based Learning, Project Based Learning, Socratic Seminars, Independent Research

• **Standards are aligned to meet the digital portfolio expectations of the AP CSP course submission.**
**Pebble Hills High School Educational Framework**

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<tr>
<th>Unit</th>
<th>Topics/Activities</th>
<th>Big Ideas</th>
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| Unit 1: Intro to Computer Science and Algorithms | - What is computer science and why should we study it? (Videos, discussion, readings, blogs)
- Intro to Collaboration (Pogo Activity)
- Computing Innovations (Drones, Self-Driving Cars, selections from students)
- [CS Illuminated] Chapter 1 | CRD, AAP, IOC |

AP® Computer Science Principles is an introductory computing course. The major areas of the course are organized around five big ideas. These big ideas are:

- Creative Development (CRD)
- Data (DAT)
- Algorithms and Programming (AAP)
- Computing Systems and Networks (CSN)
- Impact of Computing (IOC)

Programming Language and Environments: Students will use block coding in blockly and trinket.io. They will also learn Python using trinket.io and EarSketch.
Unit 1 Activity for Computing Innovations (IOC) (Computing Innovation 1, Prompt A) CR3 CR10
Students discuss with a partner what they know about drones at this time. They are then given an article to read about privacy and discuss drones again. They then watch a video about the use of drones in the Mara Elephant Project in Kenya and look at other resources. For homework they write a half-page response about the use of drones in the world today and note the positive and negative impacts drones have on society.

Unit 1 Activity for Algorithms (AAP) (P2) CR3
Students are given a task to create a set of instructions to give to a “guide” to help a “visually impaired” person get from “home” to “work” to “lunch” and then back “home.” In groups of 2 or 3, students write detailed instructions to direct a “blind” person from one location to another and then another in Google Docs. They test their instructions within the group and then print out and share the instructions with another group. The designated guide will read instructions EXACTLY as they are written and the designated blind person will do EXACTLY what the instructions say to do. The recorder will take notes about any issues observed from this activity. Groups will discuss the experience with the entire class. For homework, students will rewrite the algorithm based on the feedback and experience of the activity.
Pebble Hills High School
Educational Framework

Curricular Requirements

| CR1 | The teacher and students have access to college-level computer science resources, in print or electronic format. | See page: 3 |
| CR2 | The course provides opportunities to develop student understanding of the required content outlined in each of the big ideas described in the AP Course and Exam Description. | See page: 2 |
| CR3 | The course provides opportunities to develop student understanding of the big ideas as outlined in the AP Course and Exam Description (CED). | See pages: 2, 3, 4, 5 |
| CR4 | The course provides a minimum of three opportunities for students to investigate different computing innovations. | See pages: 2, 4, 5 |
Click here for the ChatGPT Resources and Sample Rubric.
THE 3 TAKEAWAYS from the INSTITUTE

• **Takeaway 1:** The importance of being cognitively aware of the impacts and biases of AI and its societal influences.

• **Takeaway 2:** The need for cybersecurity awareness and defense within the high school curriculum.

• **Takeaway 3:** Helping students plan for the evolving frontiers of the digital age.

Our Thoughts

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<tr>
<th>Carlo Garcia</th>
<th>Dylan Chiu</th>
<th>Andrea Saucedo</th>
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<tbody>
<tr>
<td>I for one believe that AI is way too dangerous to be allowed to be let loose. All the impacts it can do in a matter of a few fractions of a second is catastrophic.</td>
<td>Personally, I believe that AI is dangerous, but the risks outweigh the causes.</td>
<td>I believe that AI is beneficial for us because if we keep control of the AI’s we shouldn’t have any problems.</td>
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<td>On the flip side, AI could be beneficial because it thinks way faster than any human and can do a lot more too.</td>
<td>Though, if AI begins to get a mind of its own, it’ll be a disaster more catastrophic than anything we’ve encountered</td>
<td>On the flip side if we do lose control of AI’s I think we’d have implemented technology in ourselves and have the capability of fighting back at that time.</td>
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<td>We shouldn’t allow AI to have complete control of our important assets like nuclear weapons, bioweapons, and world destroying weapons.</td>
<td>I think we could allow AI to have control over some things except word changing decisions.</td>
<td>I think we should allow AI to have control of important tasks as long as a human goes over it.</td>
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On behalf of my students and myself, I wish to thank you all.