

Gloria Washington, PhD

Howard University

Assistant Professor, Computer Science

Director - Affective Biometrics Lab

BS | Lincoln University **MS & PhD** | George Washington University



Areas of Expertise

- Affective Computing
- Biometrics
- Adaptive Learning
- Computer Science Education

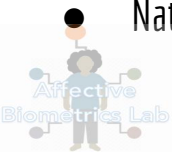
Awards and Honors

- University of Maryland Young Researcher Award Recipient
- Intelligence Community Postdoctoral Award Fellow
- National Physical Science Consortium Fellow

Affective Biometrics Lab Mission & Research

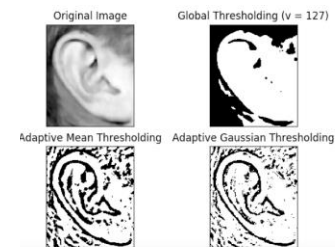
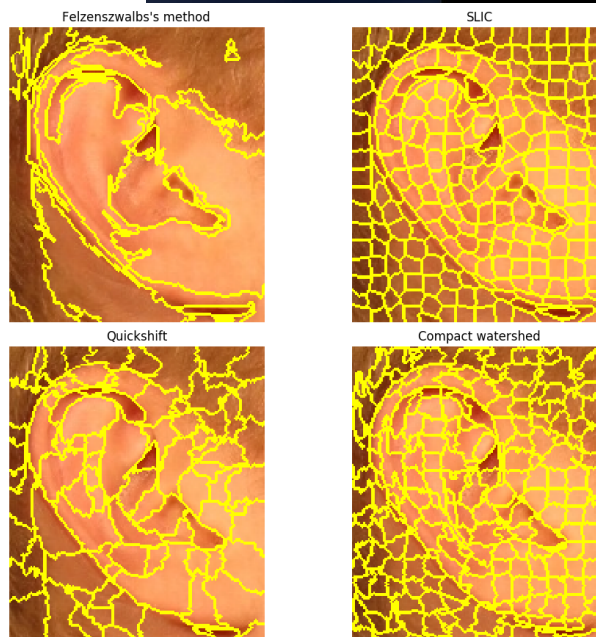
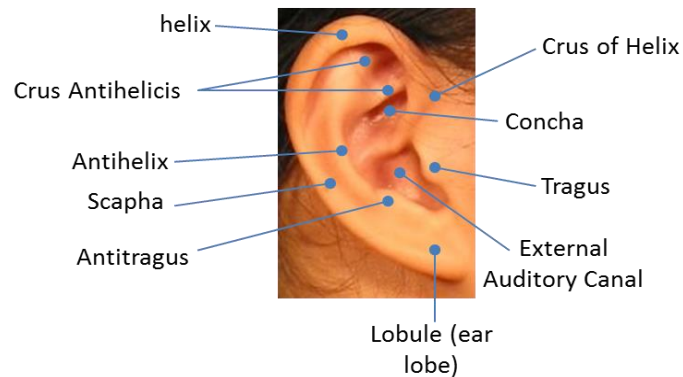
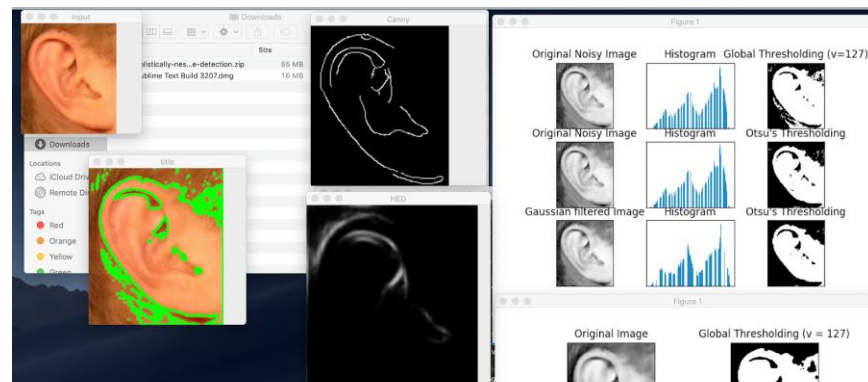
Give voices to individuals or communities that feel marginalized through 1) studying human physical or behavioral characteristics for identity or emotion recognition and/or 2) tech innovation and entrepreneurship

1. *Who is it that? (biometrics)*
2. *What do they feel? (wearables for physiological computing)*
3. *How are they going to react or behave? (AI and ML)*
4. *What can I build or develop to impact humans' feelings? (affective computing)*



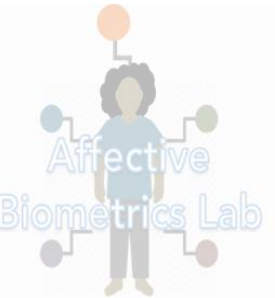
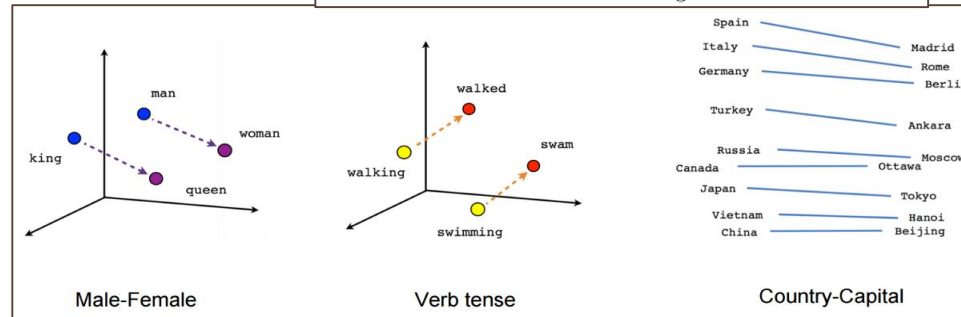
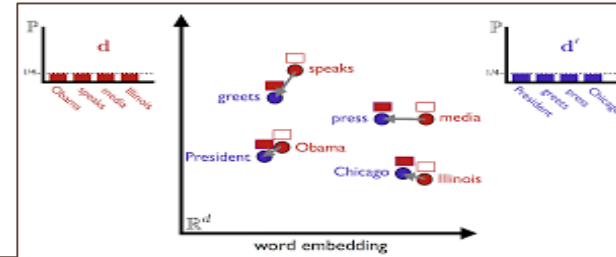
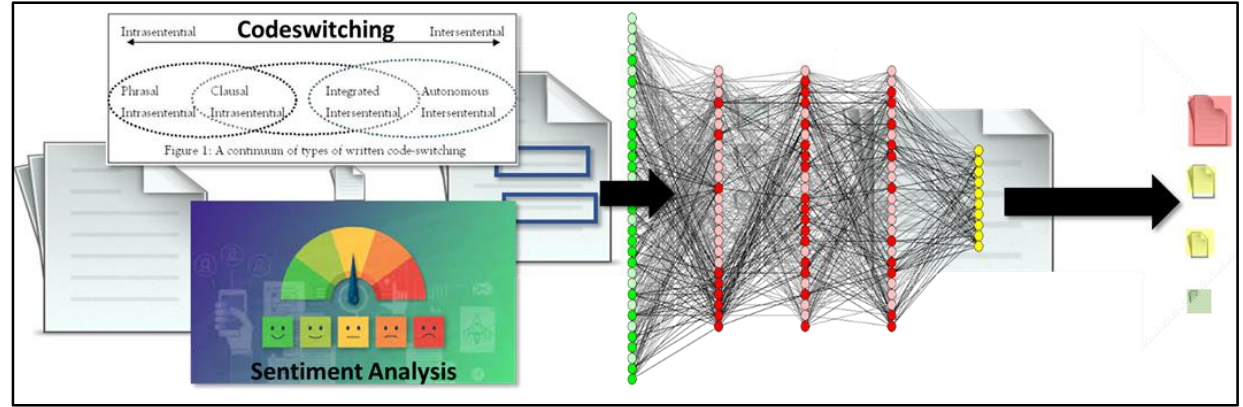
UMD ARLIS Project: Ear & Face Biometrics

- Ear biometrics
- Introduces ear classification scheme
- Tests robustness of algorithms



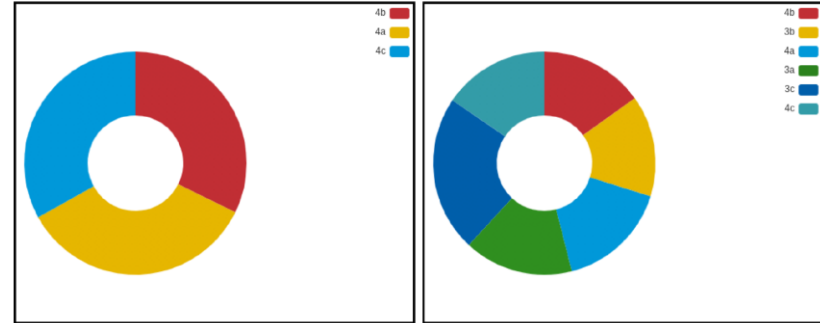
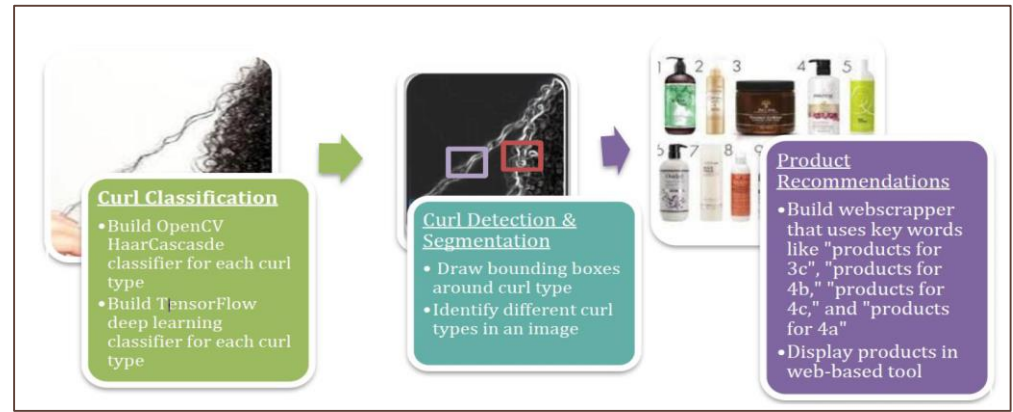
NSA Project: Sentiment analysis & Codeswitching within Tweets

- Sentiment analysis in tweets
- Codeswitching
- Idioms
- LSTMs



DHS GENIUS Grant

- Computer vision for hair type recognition
- Uses Andre Walker hair typing system
- Working prototype
- Currently improving algorithm accuracy under different conditions



Label	Precision ¹	Recall ¹
4b	77.78%	77.78%
4a	90%	100%
4c	88.89%	80%

Label	Precision ¹	Recall ¹
4b	66.67%	60%
3b	77.78%	87.5%
4a	80%	88.89%
3a	100%	90.91%
3c	64.29%	75%
4c	88.89%	72.73%

