

# Facial Recognition at the NJIT Library

**Robert Gjini**

Assistant Vice President for Facility Systems, NJIT

**Ann Hoang**

University Librarian, NJIT

Adult Services Forum 2019 – Hot Services and Hot Topics

NJLA Reference Section

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# About NJIT

- Carnegie Classification rating (R1 - Very High Research)
- Ranked 97 nationally (U.S News & World Report)
- Ranked #1 nationally in student economic upward mobility (Forbes)
- Ranked top 1% nationally for return on investment (PayScale)
- Student-faculty ratio is 17:1
- 11,859 enrollment fall 2019; average SAT score 1,296 and average GPA of 3.6 (fall 2019)
- 100% of tenured/tenure-track faculty with a PhD
- \$168 million in research activities

# About NJIT University Libraries

- 112 hours/week during fall and spring semesters
- 405,000+ annual visits to the library building
- 350,000+ annual visits to the library website
- 222,000 print books
- 185,000 ebooks
- 63,000 unique research e-journals
- 45 databases (mostly STEM)
- 24 library staff and 60+ student employees

# About NJIT Facility Systems

- Parking / Transportation
- Locksmith / Mailroom
- Work order / Timekeeping / Floor plan Systems
- Security Systems:
  - Photo ID
  - Access control & Alarm monitoring
  - Emergency phones & intercom
  - Police two way radio
  - Computer aided police dispatch
  - Video management systems

# The Need

- Uptick in reported incidents of crime
  - 15 reported thefts in library in 2014 (laptops, phones, etc.)
  - Crimes of opportunity
  - Higher than any other area on campus
- Higher level of public access
- Longer hours of operation: 7:30 to 12:00 , 2:00 or 3:00 am
- Increased patrols by Public Safety

# The Opportunity

- Security systems budget
- Panasonic relationship
- Team data gathering meeting
- FacePro system beta testing
- 3 month testing agreement

# The System

## Panasonic FacePro Facial Recognition System

- High resolution / high frame rate IP cameras (entry and exit)
- Two dedicated servers for analytics and storage
- Isolates the face within the video for capture
- Indexing of images for retrieval
- Applies custom algorithms to map the face
- Compares captured images to database of images
- Alert notification
- Public viewing monitors

# The Challenges

- Camera angle of view
- Lighting
- Networking
- Banned from campus list and photos
- False positive alerts



# The Results

- Reported thefts in library:
  - 2014 - 2015: 15
  - 2015 - 2019: 5
- Perception:
  - Increased safety
  - Increased security
- Costs
  - Panasonic donated FacePro in 2015 - \$80,000 (MSRP)
  - NJIT security systems install lighting - \$10,000

# The News

- NJIT newspaper articles
- NBC News, July 27, 2018
  - [NJIT Library Facial Recognition Testing Site](#)
- Feedback

# The Opinions & Concerns

- EU General Data Protection Regulations
- Consent
- Tracking of Individuals “Big Brother is Watching”
- Alternative Motives
- Convenience vs Privacy vs Security
- AI - Programmed Biases (race or gender)

# THE EVOLUTION OF INTELLECTUAL FREEDOM

I'M GOING TO RESEARCH WHATEVER I WANT!

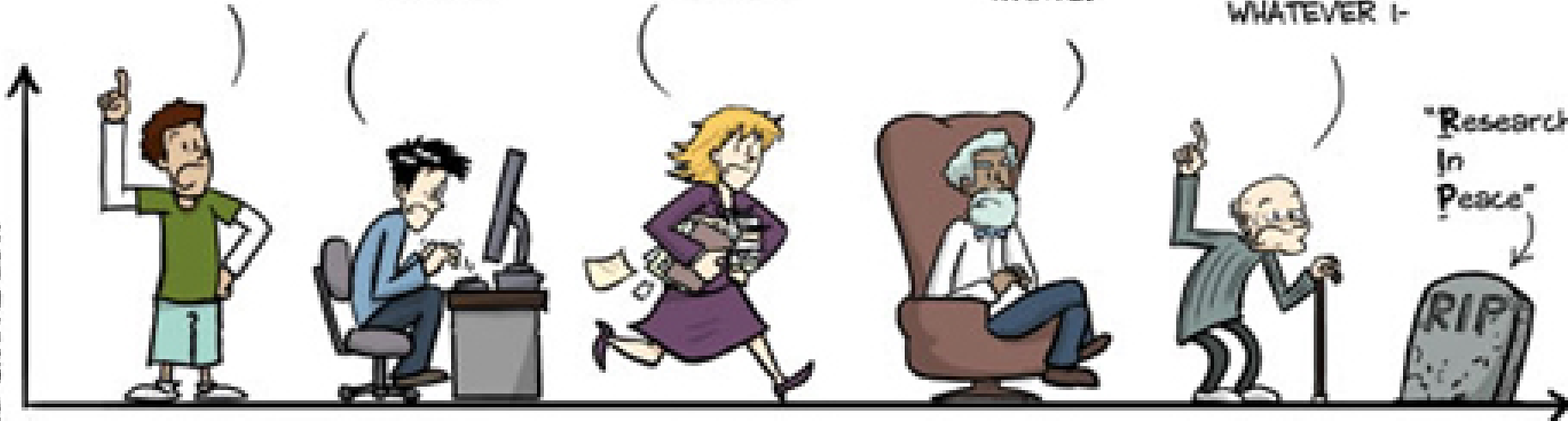
I'M GOING TO RESEARCH WHATEVER MY PROFESSOR WANTS!

I'M GOING TO RESEARCH WHATEVER MY TENURE COMMITTEE WANTS!

I'M GOING TO RESEARCH WHATEVER MY GRANT COMMITTEE WANTS!

I'M GOING TO RESEARCH WHATEVER I-

"Research in Peace"



BEFORE GRAD SCHOOL

GRAD STUDENT

ASSISTANT PROFESSOR

TENURED PROFESSOR

EMERITUS PROFESSOR

WWW.PHDCOMICS.COM

# The Future Opportunity

- Facilitate registration and access to information resources
- Enhance supports for “invisible” disabilities
- Improve student classroom experience
- Enable on-the-spot classroom analytics
- Help with attendance tracking
- Improve campus security

# Thank You



NJIT

New Jersey Institute  
of Technology