

# nscc

ISEC3077

Attack Vectors and Techniques

## Assignment 1 – Sock Puppets

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## **Introduction**

To avoid detection during the reconnaissance phase of a Security Assessments, Investigations and Pen Testing it is beneficial to protect your identity on-line. One method of doing this is to create “sock puppet” accounts. These are false on-line accounts that you can use to mask your identity. In addition to their use for security testing, this technique is also used by cyber criminals for the same purpose. The best way to understand a technique is to do it.

# Requirements

## **Step 1 – Identify a Target**

Locate a small-to-medium size business in the US that may hold sensitive data that a hacker would want.

Consider industries that China (for example) is targeting:

- (1) aerospace/aeronautic equipment, (2) high-end railway, (3) agriculture, (4) new materials, (5) medical equipment and biomedicine, (6) digital controls and robotics, (7) electric cars and energy vehicles, (8) information technology, (9) power equipment, and (10) ocean engineering.

**You must have your target approved by your instructor.**

Find one that provides information on its website about the senior employees. Choose an employee (your Target) that you think would have access to the data.

**You must have your Target approved by your instructor.**

This could be an executive or support person. Then use OSINT to find out more about this person. Recall your introduction to OSINT last year. **You must use a VPN and Incognito browsing while doing this step.** Build a profile on your victim including as much information as possible and a picture. The profile of your target will be one page of your submission.

**WARNING: AT NO TIME IN THIS ASSIGNMENT ARE YOU TO EVER CONTACT YOUR TARGET.  
THIS IS A THEORECTICAL EXERCISE.**

# Target

## Profile: Zach Goins

### Personal Overview

**Name:** Zach Goins

**Location:** Denver, CO, US

**Current Position:** Senior Robot Software Engineer, **Dronesense, Inc.** ([Website](#))

**LinkedIn:** [Zach Goins](#)

Zach Goins is a **robotics and autonomy engineer** with a background in **robot software development, autonomy, and infrastructure**. His career spans across multiple companies specializing in **robotic systems, SLAM (Simultaneous Localization and Mapping), and autonomy software**. With a **non-traditional entry into engineering**, he honed his expertise through hands-on experience and deep technical engagement rather than a conventional engineering degree.

Beyond engineering, Goins has an entrepreneurial spirit, having co-owned a business, and maintains a strong interest in **music, finance, philosophy, and next-generation waste disposal technologies**.

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## Current Employment

### Dronesense, Inc.

**Role:** Senior Robot Software Engineer

- Developing **robotic autonomy solutions** for drone operations.
  - Working on **real-time data processing, software infrastructure, and sensor integration**.
- 

## Work History

- **2024 - 2024: Staff Autonomy Software Engineer - Infrastructure, Fox Robotics**
    - Worked on robotic automation solutions with a focus on infrastructure and scalability.
  - **2023 - 2024: Co-Owner and Operator, BETTERBUILD LIMITED**
    - Entrepreneurial role, managing operations and strategy.
  - **2018 - 2023: Senior Autonomy Software Engineer, Scythe Robotics**
    - Led software development for **autonomous robotic systems**.
    - Specialized in **robotic perception, SLAM, and software infrastructure**.
- 

## Education

University of Florida

- **Degree:** Bachelor's in **Computer Software, Embedded Systems, and Business**
  - **Years Attended:** 2011 - 2015
  - Studied **machine intelligence, software development, and embedded systems**, developing expertise in robotics through hands-on experience.
- 

## Technical Expertise

- **Robotics & Autonomous Systems:** Extensive experience in **robotic control systems, SLAM, and AI-driven navigation.**
  - **Software Development:** Skilled in **Rust, C++, Python**, and embedded systems programming.
  - **Infrastructure & Systems Engineering:** Experience in **cloud-based robotics, networking, and real-time data processing.**
  - **Entrepreneurship & Business:** Background in **business operations, finance, and startup scaling.**
- 

## Notable Mentions & Publications

- **Scythe Robotics Blog Feature:** [Scythe Spotlight - Zach Goins](#)
  - **Robotics Summit Speaker:** [Robotics Summit Profile](#)
  - **Conference Speaker:** [The Robot Report - Rust in Robotics](#)
  - **GitHub Profile:** [github.com/zachgoins](#)
  - **GitLab Profile:** [gitlab.com/zachgoins](#)
  - **Patent Contributions:** [Zachary Austin Goins - Justia Patents](#)
- 

## Social & Public Presence

- **LinkedIn:** [LinkedIn Profile](#)
  - **YouTube:** [Zach Goins](#)
  - **Zola:** [Zach & Becca](#)
- 

## Possible Contact Information

### Addresses:

- 2611 W Bayaud Ave, Denver, Colorado 80219
- 4000 SW 37th Blvd, Gainesville, Florida 32608 (former)

### Email Addresses:

- zach@dronesense.com
- zach.a.goins@gmail.com
- tpchoicepa@gmail.com
- okdrummer93@hotmail.com
- okdrummer93@aol.com

- [zachgoins@gmail.com](mailto:zachgoins@gmail.com)
- [zach.goins@foxbots.co](mailto:zach.goins@foxbots.co)
- [zgoins@foxbots.co](mailto:zgoins@foxbots.co)
- [zachg@foxbots.co](mailto:zachg@foxbots.co)

**Phone Numbers:**

- 918-801-8242 (Wireless)
  - New Cingular Wireless Pcs Llc - Il
  - Last Report January 2025
- 918-791-5690
- 918-449-1719
- 918-786-5514
- 954-562-7636

**Suspected Associates:**

- Elisha Goins (sister)
- Kristine Goins (mother)
- Pat Goins (father)
- Zachary Goins (uncle)
- Alison Goins (aunt)
- Rebecca Barbara “Becca” Swango (live-in Fiance)
  - (305) 395-1896
  - <https://www.linkedin.com/in/becca-swango/>
  - <https://www.facebook.com/becca.swango>
  - <https://www.youtube.com/channel/UCgGMjJu7cjjl-HC4MQHmw4w>
  - <https://www.pinterest.com/beccasago/>
  - Wedding: April 5, 2025 in Las Vegas, NV

*The target does not have any public social media other than LinkedIn. This presents some challenges, but he has been profiled on several robotics publications which fleshes out our profile of him and gives us more to work with.*

**Photos:**



fig.1



fig.2



fig.3



fig.4



Fig.5

- **The target's address:**  
2611 W Bayaud Ave, Denver, Colorado 80219  
purchased on 2022-03-23 for \$560,000.  
<https://marvin-gardens.com/real-estate/home/2611-W-Bayaud-Ave-Denver-CO-80219/2-3348466/>

## **Step 2 – Build an Identity**

Now it is time to build a fake on-line identity (your Sock Puppet) that may be someone that your victim would communicate with. Points to consider when considering your Target and your Sock Puppet may be:

- Same age or different
- Same Gender Identity or different
- Same ethnicity or different
- Same religion or different
- Same political persuasion or different
- Same Interests and/or volunteer activities or different
- Same sexual orientation or different
- Etc.

**Here are some things you should NOT do (you will lose points if you do):**

When considering your Target and your Sock Puppet, they should NOT have the same:

- Town/City/State – Be careful that your Target did not (for example) grow-up in or go-to-school in your Sock Puppet's location.
- Educational Background and Definitely Not the same schools

The trick is to find a match between their speciality and yours without you having to fake knowledge that you don't have. The following example is paraphrased from a previous student's assignment:

*Example: Your target is a Chemical Researcher, and your Sock Puppet is an entrepreneur with no science background who wants to start a business making home beauty products (soap or skin cleanser based on herbal mixtures).*

**Your Sock Puppet has a life that matches them.**

For the purposes of this assignment, you are to create false social media accounts that cannot be traced back to you. This exercise is intended for you to discover the success and pitfalls in developing these accounts. (i.e. expect to get locked out – Challenge: can you avoid this?)

**IMPORTANT NOTE 1: IN ALL STEPS BELOW, WHENEVER POSSIBLE, YOU SHOULD ALWAYS USE INCOGNITO BROWSING TO AVOID COOKIES. YOU WILL ALSO DO ALL ACTIVITY RELATED TO YOUR FALSE ACCOUNT FROM A SEPARATE VM AND NO-LOGGING VPN.**

**IMPORTANT NOTE 2: RECORD ALL USERNAMEs, PASSWORDs, EMAILs, IDENTITIES, FALSE AGES, FALSE BIRTHDATES ETC.; YOU WILL FORGET THEM.**

### **VPN**

All of your activities on-line should be masked through the use of a VPN. But you probably won't be able to establish certain Social Network accounts using a VPN. Instead, choose a public wireless network to do your work from so your activity can't be traced back to your IP address. You should access free VPN software that you can use for this assignment.

## Task 1 - Email

Most on-line accounts require an email address. You are to access free on-line email services to create a false email identity (to be used for social media accounts). As an added layer of protection, you should use an encrypted email service and/or a bullet proof provider (eg. does not share information). The name attached to these accounts might or might not be your exact Sock Puppet name. The names should be designed to not attract attention. Whenever possible, do not use information that can be tied to you (other emails, Nickname, phone numbers, hometown etc.). Change your age and other identifying information. Only provide (false) minimal information and make each account as secure and private as possible. Never attach a picture unless it is required; in which case use an avatar image that does not look like you if the provider will accept it or a solution of your own design.

**Email:** mollier@mailfence.com

## Task 2 – Social Media

Using the above information, establish false social media accounts in Facebook, X and LinkedIn. If one of these proves impossible you may substitute another on approval from your instructor. The names attached to these accounts should be designed to not attract attention. Whenever possible, do not use information that can be tied to you (other emails, Nick-name, phone numbers, hometown etc.). Change your age and other identifying information. Only provide (false) minimal information and make each account as secure and private as possible. Never attach a picture unless it is required; in which case use an avatar image that does not look like you if the provider will accept it or a solution of your own design.

**Facebook:** Mollie Russell (banned)

**X:** @Mollier94801

**LinkedIn:** <https://www.linkedin.com/in/mollie-russell-0a0a68348/>

**Instagram:** @Mollier90210

**[see “Online Presence” for more details]**

*Initial set-up of email and social media accounts was done on public Wi-Fi. All subsequent interactions with the sock puppet were done through a NordVPN server located in San Francisco.*

# Sock Puppet Profile

## Mollie Russell

### **Background:**

Mollie grew up in the Bay Area. Her father, a retired Silicon Valley software engineer, nurtured her curiosity for technology, while her mother dedicated her life to homemaking. She shares a close bond with her older sister, Susan MacNeil (34), who now lives in Colorado Springs with her husband and their newborn.

Two years ago, after a difficult breakup, Mollie moved back in with her parents. Now, restless and ready for a fresh start, she has arranged with her employer to transition from a hybrid work setup to full remote for a year. She plans to spend that time in Colorado Springs, officially to help Susan with the baby—but, in reality, she wants to explore the idea of making the move permanent. A lover of the outdoors, Mollie is eager to experience life in a place with four true seasons, and she hopes the change will help her leave painful memories behind.

While in Colorado Springs, she will connect with Zach and his fiancée, Becca, bonding over their shared passion for music and outdoor adventures. In time, she will uncover Zach's expertise in robotics—an area that has always fascinated her, thanks to her tech-savvy father. Though she has little technical knowledge herself, Mollie is sharp, curious, and eager to learn.

### **Personal:**

#### **Birthday**

June 1, 1992

#### **Age**

32 years old

#### **Zodiac**

Gemini

#### **Mother's maiden name**

Parker

#### **SSN**

553-90-XXXX

#### **Employment**

Market Researcher for Erika4Travel

***School:***

University of San Francisco  
Bachelor of Science in Business Administration (BSBA)  
Major:  
Marketing  
Minor:  
English in Writing  
Graduated:  
2014

***Physical characteristics:***

**Height**  
5' 8" (173 centimeters)  
**Weight**  
134 pounds (60.8 kilograms)  
**Blood type**  
O-

***Contact Info:***

**Address**  
1301 Roosevelt Ave, Richmond, CA 94801  
**Email Address**  
[mollier@mailfence.com](mailto:mollier@mailfence.com)  
**Phone**

***Finance:***

**Visa**  
4539 5997 3343 8660  
**Expires**  
11/2028  
**CVV2**  
947

***Tracking numbers:***

**UPS tracking number**  
1Z 296 00F 82 4596 150 6  
**Western Union MTCN**  
7720281553  
**MoneyGram MTCN**  
35349373

**Other:**

**Vehicle**

2014 Toyota Tacoma

**GUID**

7c1b98da-21d3-467c-bd92-c698f3fa7a16

**Favorite color**

Red

*It was decided to go with a 32-year-old woman from Northern California. The intention is not to use any sexual advances, as there are no indications that this might be successful. However, men are often more open to engage with an attractive female, even if there they have no overt sexual or romantic intentions. Sock puppet attributes were chosen that would align with the target's outdoorsy, musical and tech interests. Also, this opens the possibility of forming a connection with Zach's fiancé Becca, and leveraging that to get closer to Zach.*

### **Online Presence:**

*Although the assignment did not recommend posting pictures to the puppet accounts, it was felt that social media accounts without pictures lacked credibility.*

#### **Facebook**

Mollie Russell

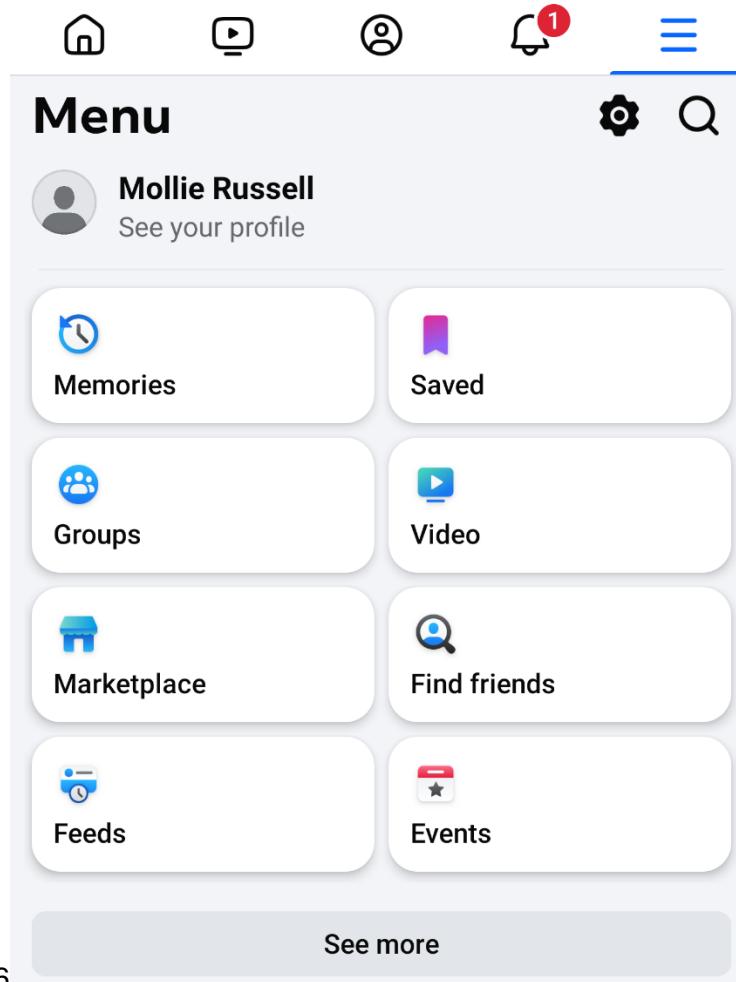


Fig.6

*Initial setup of this account was done successfully. However, when it was logged into again and details such a current city (Richmond, California) were added, the account was suspended. More research is needed to create a sustainable Facebook sock puppet.*



Help

## What this means

Your account is not visible to people on Facebook right now, and you cannot use it.

## What you can do

You have 180 days left to appeal our decision. We may need to collect some info from you that'll help us review your account again.

## Why this happened

Your account, or activity on it, doesn't follow our Community Standards on account integrity.



Read more about this rule

## More information



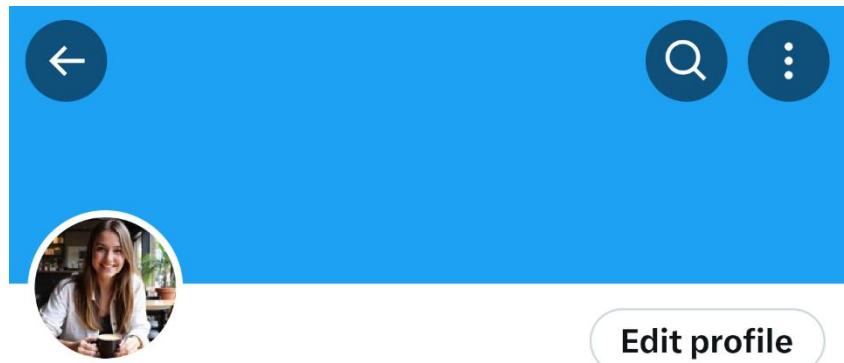
How we made this decision

Appeal

Fig.7

X

@Mollier94801



**Mollier** 🔒 ✅ Get Verified

@Mollier94801

NorCal. Coffee Lover. Tech Curious.

Born June 1, 1992 Joined January 2025

21 Following 0 Followers

**Posts** Replies Highlights Articles Media

## Who to follow

**Tim Ferriss** ✅  
@tferriss

Author of 5 #1 NYT/WSJ bestsellers,  
early-stage investor ([tim.blog/portfolio](http://tim.blog/portfolio)), T..

Headspace and 2 others follow

Fig.8

**Mollier**  
2 posts

Posts    **Replies**    Highlights    Articles    Media

**Mollier** 🔒 @Mollier94801 · 21h  
Harder than it looks!



Speech bubble icon    Download icon    Heart icon    1 like icon    Bookmarks icon    Share icon

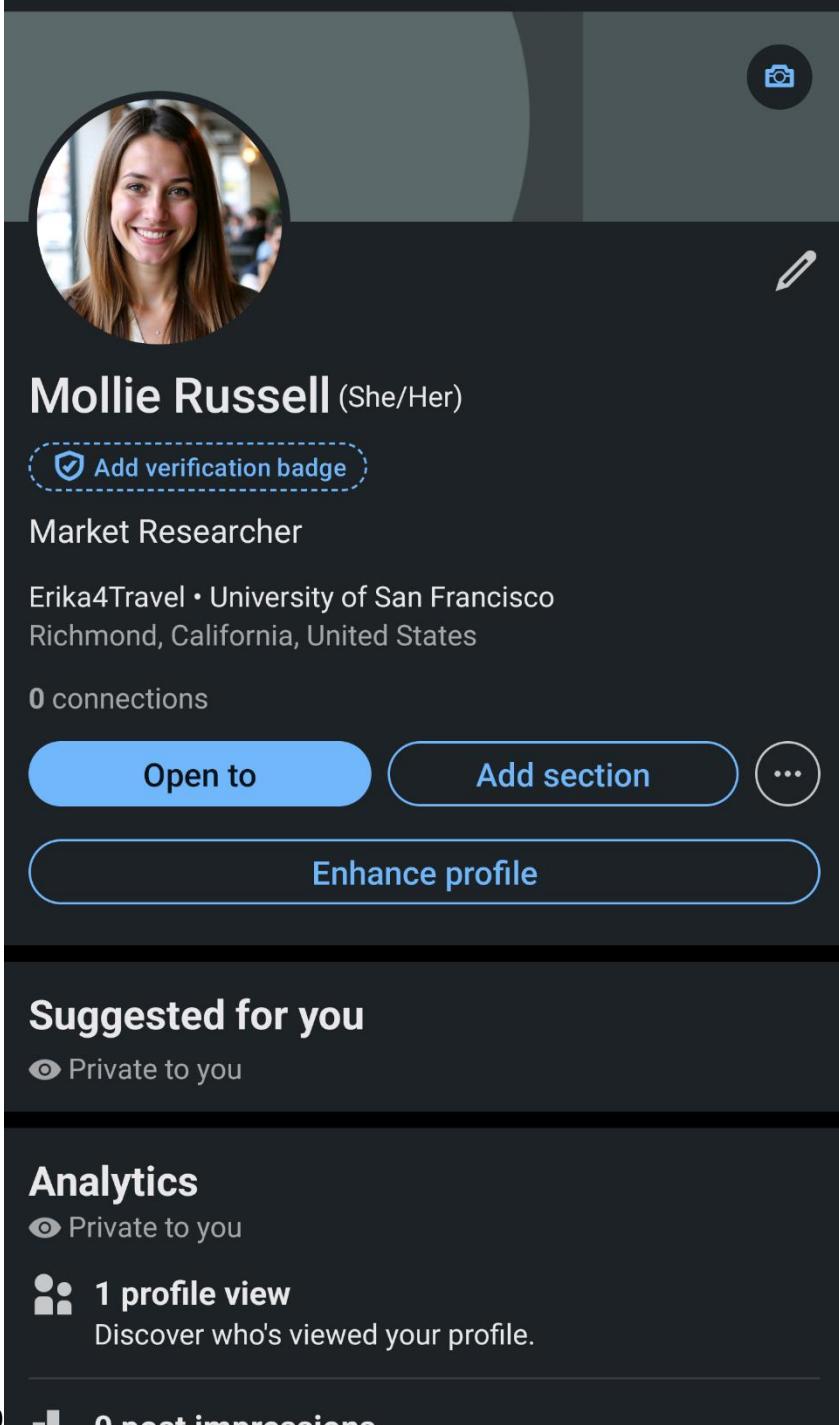
**Grant Cohn** ✅ @grantcohn · 5d  
Inside Tortas Ahogadas Mi Barrio is Eas  
Oakland.



Fig.9

## LinkedIn

<https://www.linkedin.com/in/mollie-russell-0a0a68348/>



A screenshot of a LinkedIn profile page for Mollie Russell. The profile picture shows a smiling woman with long brown hair. The title is "Mollie Russell (She/Her)". Below the title is a button to "Add verification badge". The job title is "Market Researcher". The location is "Erika4Travel • University of San Francisco, Richmond, California, United States". It shows "0 connections". There are buttons for "Open to", "Add section", and "Enhance profile". Below the profile is a "Suggested for you" section with a "Private to you" note. The "Analytics" section shows "1 profile view" with a note to "Discover who's viewed your profile". At the bottom, it says "fig.10 0 post impressions".

Mollie Russell (She/Her)

Add verification badge

Market Researcher

Erika4Travel • University of San Francisco  
Richmond, California, United States

0 connections

Open to Add section ...

Enhance profile

Suggested for you

Private to you

Analytics

Private to you

1 profile view  
Discover who's viewed your profile.

fig.10 0 post impressions

## About



Remote | Marketing & Market Research | Outdoor Enthusiast | Tech Curious

I'm a market researcher with a passion for consumer insights, digital marketing, and data-driven strategy. With a BSBA in Marketing from the University of San Francisco, I've spent the past decade helping brands understand their audiences and refine their messaging.

Currently, I work at Erika4Travel, analyzing trends and delivering strategic recommendations. Outside of work, I'm an outdoor enthusiast exploring Colorado Springs and a tech-curious learner fascinated by AI, robotics, and innovation.

Let's connect!

## Activity

Create a post



0 followers

You haven't posted yet

Posts you share will be displayed here.

Show all activity →

## Experience



### Market Research Analyst

Erika4Travel · Full-time

Apr 2021 - Present · 3 yrs 11 mos

👉 Online Marketing, Search Engine Optimization (SEO) and +2 skills

fig.11

**Experience**

 **Market Research Analyst**  
Erika4Travel · Full-time  
Apr 2021 - Present · 3 yrs 11 mos

❖ Online Marketing, Search Engine Optimization (SEO) and +2 skills

---

 **Digital Media Analyst**  
Glassdoor · Full-time  
Feb 2019 - Apr 2021 · 2 yrs 3 mos

❖ Online Marketing and Digital Media

---

 **Michelle Engineering**  
Full-time · 4 yrs 8 mos

- **Data Analyst**  
Jul 2015 - Feb 2019 · 3 yrs 8 mos
- **Market Research Intern**  
Jul 2014 - Jul 2015 · 1 yr 1 mo

❖ Online Marketing and Digital Media

fig.12

**Education**



**University of San Francisco**  
Bachelor of Science in Business Administration  
(BSBA), Major: Marketing Minor: English in Writing  
2014

**Skills** + 

**Online Marketing**  
 4 experiences across Erika4Travel and 2 other companies

---

**Digital Media**  
 4 experiences across Erika4Travel and 2 other companies

---

**Show all 4 skills →**

**Interests**

**Companies** **Schools**

---



**University of San Francisco**  
132,854 followers

 **Following**

---



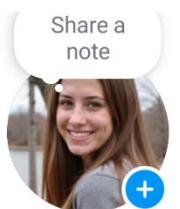
**Michelle Engineering**  
1,255 followers

fig.13

**Instagram**

Instagram.com/mollier90210

**mollier90210** ▾



Share a  
note

2  
posts

1  
followers

16  
following

Mollie Russell

Edit profile

Share profile



Follow some accounts to get started

[See all](#)



Find more people  
to follow

[See all](#)



fig.14

## Pictures

Source: genigpt.net, accessed through Photo Realistic Image GPT Pro

*Note: This assignment has highlighted the fact that while AI generated pictures can be useful for sock puppet creation, AI can make mistakes that will destroy the sock puppets credibility. Below I have included several pictures of “Mollie Russell” that were generated with genigpt. Many of them are quite good bit I’ve made note of some details that the AI got wrong.*



Fig.15



Fig.16

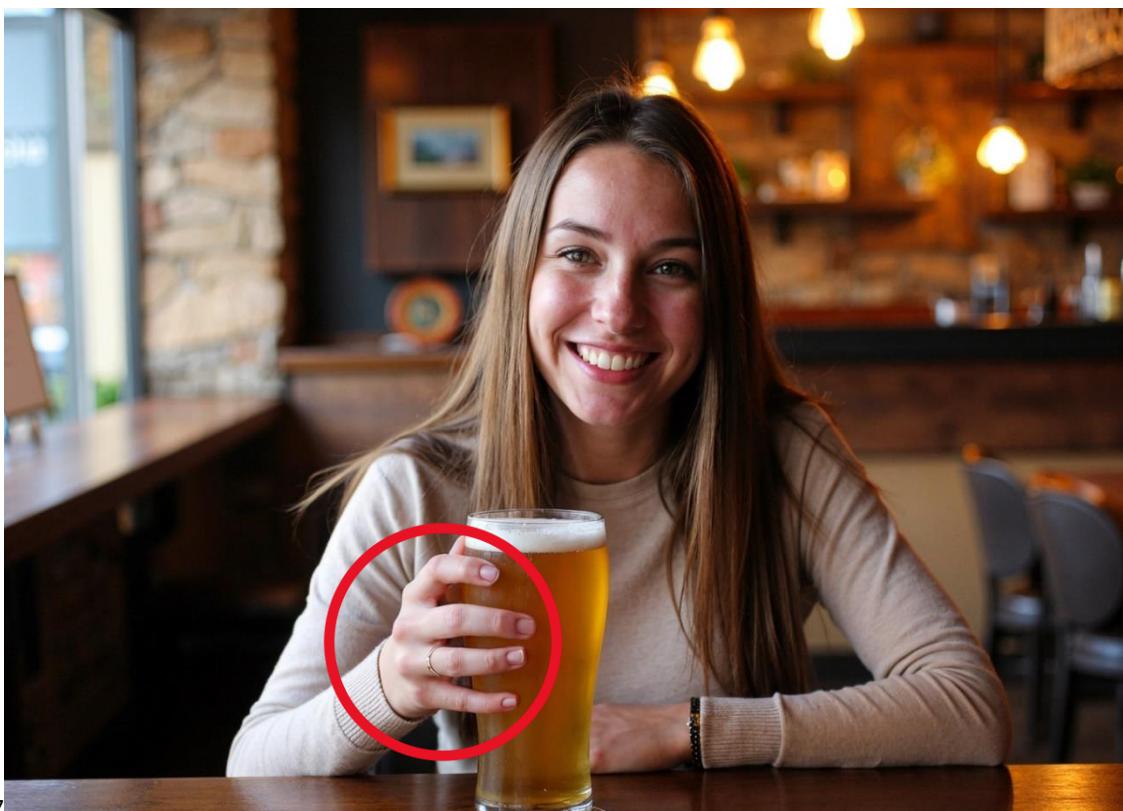


Fig.17



Fig.18



Fig.19



Fig.20



fig.21



Fig.22



Fig.23



Fig.24



Fig.25



Fig.26



Fig.27



Fig.28



fig.29



fig.30



fig.31

Fig.32





Fig.33

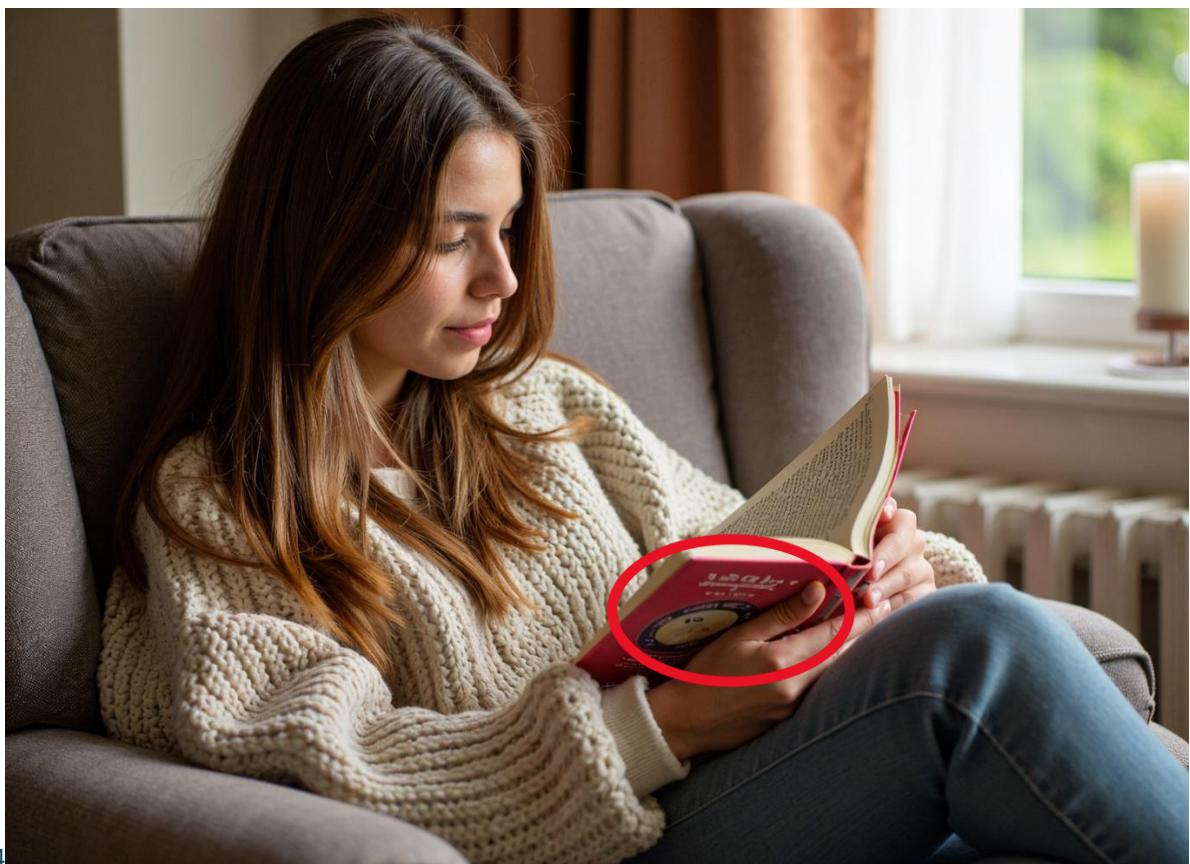


fig.34

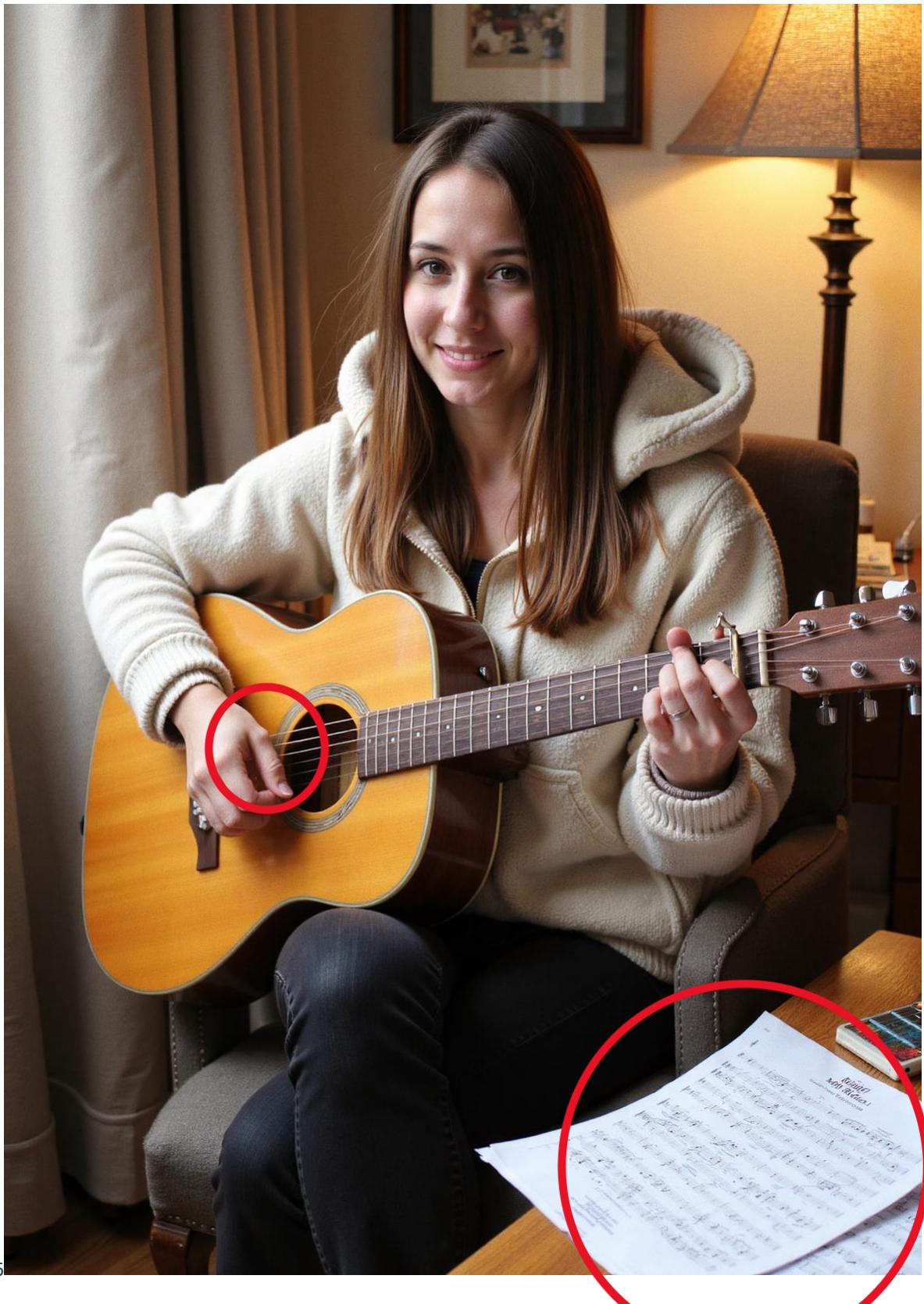


fig.35



fig.36