

# Resumes and Cover Letters

Understanding the Documents and the Systems

CS/IT/Robotics Career Prep

Spring 2026

# Introduction

## Why This Lecture Matters

- ▶ First impression = interview opportunity
- ▶ In tech: resume gets you past AI screening
- ▶ Resume + cover letter = your ambassador when you can't be there

## Two Approaches We'll Cover

1. **Manual crafting** — Quality over quantity
2. **Agentic automation** — Quantity with quality control

# Part 1: What Are These Documents For?

## What a Resume Actually Does

- ▶ **Not** a biography
- ▶ **Not** a list of everything you've done
- ▶ **Is** a marketing document: “Why should they hire you?”  
*“Your résumé is far too crucial to your job search to leave to such a slapdash approach.” — Andy Lester, Land the Tech Job You Love*

## What a Cover Letter Does

- ▶ Connects *your* story to *their* problem
- ▶ Proves you care about *this* company, not just any job
- ▶ Shows you can write clearly and professionally

## Part 2: Knowing What You Want

### Self-Assessment Through the Motivation Worksheet

Understanding your preferences helps you:

- ▶ Target roles that actually interest you
- ▶ Write more authentic documents
- ▶ Recognize good opportunities when they appear

Rate these 1-10 for importance:

- ▶ Salary and financial requirements
- ▶ Benefits (health, 401k, stock)
- ▶ Location and commute
- ▶ Pride and prestige
- ▶ Meaningful work
- ▶ Team dynamics and mentorship
- ▶ Technology stack
- ▶ Autonomy and management style

## Part 3: Resume Fundamentals

### The Core Principle

#### **Accomplishments > Duties**

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Weak (Duty)

Strong (Accomplishment)

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Responsible for website

Reduced website load time by 40% through caching optimization

Wrote Perl scripts

Created automation system that reduced monthly reporting from 3 days to 4 hours

Maintained servers

Improved system uptime from 95% to 99.9%

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### Use Numbers Whenever Possible

- ▶ “Managed \$500K budget”
- ▶ “Led team of 6 developers”
- ▶ “Reduced customer support tickets by 30%”

## Standard Resume Sections

1. **Header** — Name, contact info, LinkedIn, GitHub/portfolio
2. **Professional Summary** — 2-4 sentences, lead with strengths
3. **Technical Skills** — Relevant technologies only
4. **Professional Experience** — Accomplishments, not duties
5. **Education** — Degree, institution, graduation year, relevant coursework
6. **Optional** — Certifications, publications, open source, awards

## What to Omit

- ▶ Photo (in US)
- ▶ Age, birth date, marital status
- ▶ Salary history or requirements
- ▶ “References available upon request”
- ▶ High school info (if you have college degree)
- ▶ Very old experience (>10-15 years ago)

## Common Resume Killers

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Error	Why It Fails
Typos and grammatical errors	Suggests carelessness; tech requires attention to detail
Exaggeration or lies	Will be discovered; instant disqualification
Generic summary	Wastes space; says nothing distinctive
Listing duties instead of accomplishments	Doesn't demonstrate value
Poor formatting	Hard to read; suggests technical incompetence

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## Resume Length

- ▶ **< 10 years experience:** One page
- ▶ **10+ years experience:** Two pages maximum

## Formatting Best Practices

- ▶ Consistent formatting throughout
- ▶ Plenty of white space — don't cram
- ▶ 10-12pt readable fonts
- ▶ Use bold and italics sparingly

## File Naming

Firstname\_Lastname\_Resume.pdf

Not: resume.pdf, resume\_final.pdf, my\_stuff.doc

## 2026 Resume Landscape

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2009 (Book)	2026 Reality
Word .doc preferred	PDF preferred for most applications
Personal website	LinkedIn + GitHub/portfolio expected
Plain text for email	ATS parsing handles most submissions
“Website URL” optional	Personal branding essential

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### ATS Optimization

- ▶ **Keywords:** Match language from job posting
- ▶ **Clean formatting:** No graphics, headers/footers can break parsing
- ▶ **Standard section names:** “Experience” not “Where I’ve Made an Impact”
- ▶ **File type:** PDF > Word in 2026

## Part 4: Cover Letter Fundamentals

### Purpose

*“The cover letter is your chance to speak directly to the hiring manager... to make the case that you’re worth talking to.”*

- ▶ Not a formality
- ▶ Not a restatement of your resume
- ▶ Your opportunity to connect specific experience to their specific needs

### Structure

1. **Header** — Your contact info, date, recipient
2. **Salutation** — Name the person when possible
3. **Opening** — Position, brief hook, how you heard about it
4. **Body (1-2 paragraphs)** — Connect your experience to their needs
5. **Closing** — Express interest, state what you want, thank them

## What to Include

- ▶ Why you're interested in *this* company (not just any job)
- ▶ How your experience specifically matches their requirements
- ▶ Evidence that you've researched them
- ▶ Brief examples that complement (don't repeat) your resume

## What to Avoid

- ▶ Repeating your resume verbatim
- ▶ Generic statements that could apply to any company
- ▶ Apologizing for qualifications you don't have
- ▶ Salary expectations (in initial submission)
- ▶ Negative comments about current/previous employers

## Cover Letter Example

**Opening** (specific to company): > “When I saw your team is building autonomous navigation for warehouse robots, I knew I had to apply. My internship at Acme Robotics involved precisely this challenge. . . .”

**Body** (connect experience to their needs): > “You mention you’re looking for someone to improve SLAM algorithms. Last semester, I reduced localization drift by 35% using an extended Kalman filter approach. . . .”

**Closing** (call to action): > “I’d welcome the opportunity to discuss how my robotics experience could contribute to your navigation team.”

## Part 5: Agentic Automation

### Why Automation Matters in 2026

- ▶ Job markets are flooded with applications
- ▶ Many companies use AI for initial screening
- ▶ Quality applications still win — but quantity helps
- ▶ **Automation gets you in the door; quality gets you the job**

### The Two Modes of LLM Use

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Mode	Description
<b>Brainstorming partner</b>	Feed raw notes, get suggestions, write in your voice
<b>Output generator</b>	Generate drafts from templates, with human review

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## The Automation Pipeline

Job Feed (scraped) --> Agent Scrapes --> Template Matching  
|  
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Human Review/Edit <-- LLM Generates Customizes <-- LLM

**Flow:** Job Feed -> Agent Scrapes -> Template Matching -> LLM Customizes -> LLM Generates -> Human Review -> Send

## Step 1: Agent-Based Job Scraping

### What to Collect

- ▶ Job title and level
- ▶ Company name and description
- ▶ Required technologies and skills
- ▶ Responsibilities and qualifications
- ▶ Salary range (if available)
- ▶ Application deadline

### Tools

- ▶ Browser automation (Playwright, Puppeteer)
- ▶ Job aggregation APIs (Indeed, LinkedIn APIs)
- ▶ LLM agents can pretty effectively scrape anything
- ▶ RSS feeds from job boards

## Step 2: Template-Based Document Generation

### Base Resume

- ▶ One comprehensive document with all experiences
- ▶ Update once, use forever
- ▶ Filter/section for each job application

### Cover Letter Template

[Paragraph 1: Hook - specific to company/role]

[Paragraph 2: Your relevant experience]

[Paragraph 3: Why this company interests you]

[Paragraph 4: Call to action]

## Step 3: LLM Generation (1)

### Key Prompting Strategy

- ▶ **Never** just “write a cover letter”
- ▶ **Always** provide: job requirements, your background, specific company info
- ▶ **Add constraints:** “Use active voice,” “Avoid cliché phrases,” “Sound like a confident engineer”

## Step 3: LLM Generation (2)

### Example Input

Job requirements:

- 3+ years Python experience
- Experience with machine learning
- AWS certification preferred

Your background:

[Extract relevant items from base resume]

Generate:

1. A targeted resume summary (3 sentences)
2. Two accomplishment statements that match the job

## Step 4: Quality Control

### Why This Matters

- ▶ AI-generated content often sounds generic
- ▶ Employers use AI detection tools
- ▶ Mass-generated content can get you rejected

### Human Review Checklist

- Voice sounds like you (or at least human)
- Specific details match the actual company
- No generic AI phrases (“I am writing to express my enthusiasm”)
- All facts about your experience are accurate
- No hallucinated skills or requirements

# Avoiding the “AI Slop” Look

## Generic AI Phrases to Avoid

- ▶ “I am writing to express my enthusiasm. . . .”
- ▶ “I am a highly motivated professional. . . .”
- ▶ “I believe I would be a great fit. . . .”
- ▶ “I am passionate about [everything]. . . .”

## Better Alternatives

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Generic	Human
“I’m excited to apply for. . . .”	“When I saw your team uses React for X, I reached out because. . . .”
“I’m a passionate developer”	Specific: “I’ve built 3 React apps for local nonprofits”
“I would be a great fit”	Show, don’t tell: describe relevant project

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## Ethics & Best Practices

### Disclosure

- ▶ Some professors/instructors require disclosing AI use
- ▶ Some companies appreciate transparency
- ▶ Some view it as normal 2026 workflow

### Quality Over Quantity

- ▶ 10 well-customized applications > 100 mass-generated ones
- ▶ Automation is a multiplier — good input  $\times$  automation = great output
- ▶ Bad input  $\times$  automation = garbage

### Application Limits

- ▶ Some ATS flag suspicious patterns
- ▶ Some companies limit applications per candidate

## Summary: Key Principles

1. **Resume = marketing document**, not biography
2. **Cover letter = connection**, not formality
3. **Accomplishments > duties** — use numbers
4. **Customization is essential** — one size fits none
5. **Automation is a force multiplier** — good input  $\times$  automation = great output
6. **Quality matters** — always human review, always

# Questions?

## Resources

- ▶ *Land the Tech Job You Love* — Andy Lester
- ▶ Your career services office

Thank You