

Writing and Thinking

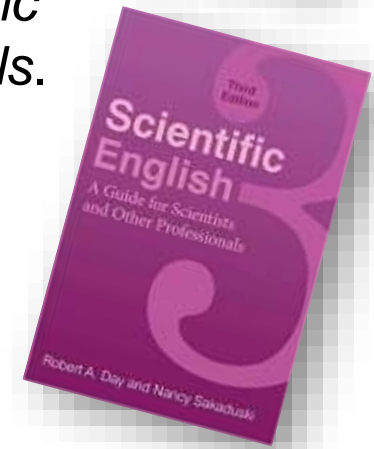
Writing Reader-Based Texts

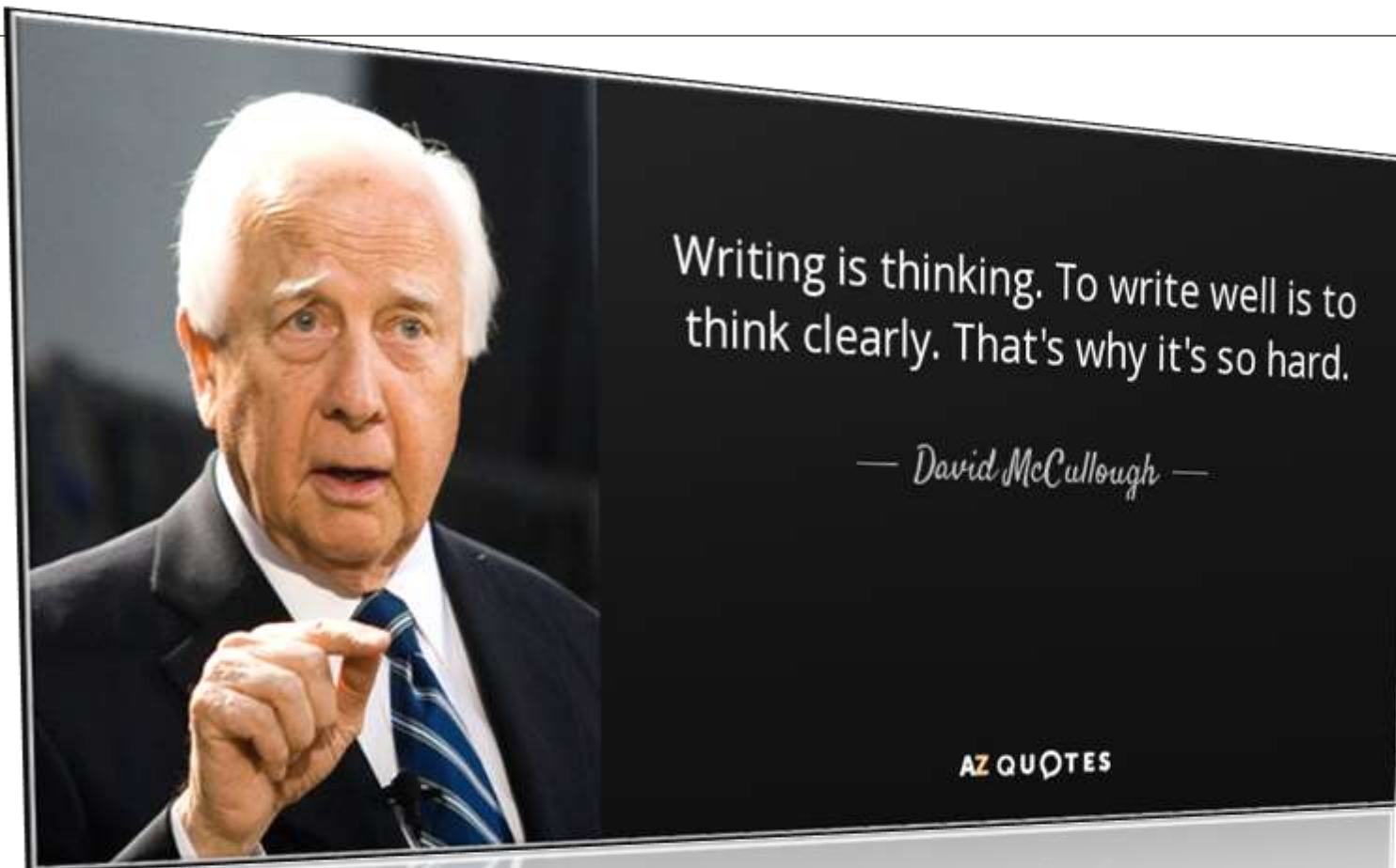
ENGR 361: Scientific Research Communication

<https://www.csulb.edu>

References

- Alred, G. J., Brusaw, C. T., & Oliu, W. E. (2009). *Handbook of technical writing*. Macmillan.
- Day, R. A., Sakaduski, N., & Day, N. (2011). *Scientific English: A guide for scientists and other professionals*. ABC-CLIO.





- **David Gaub McCullough** is an American author, narrator, historian, and lecturer. He is a two-time winner of the Pulitzer Prize and the National Book Award and a recipient of the Presidential Medal of Freedom, the United States' highest civilian award.

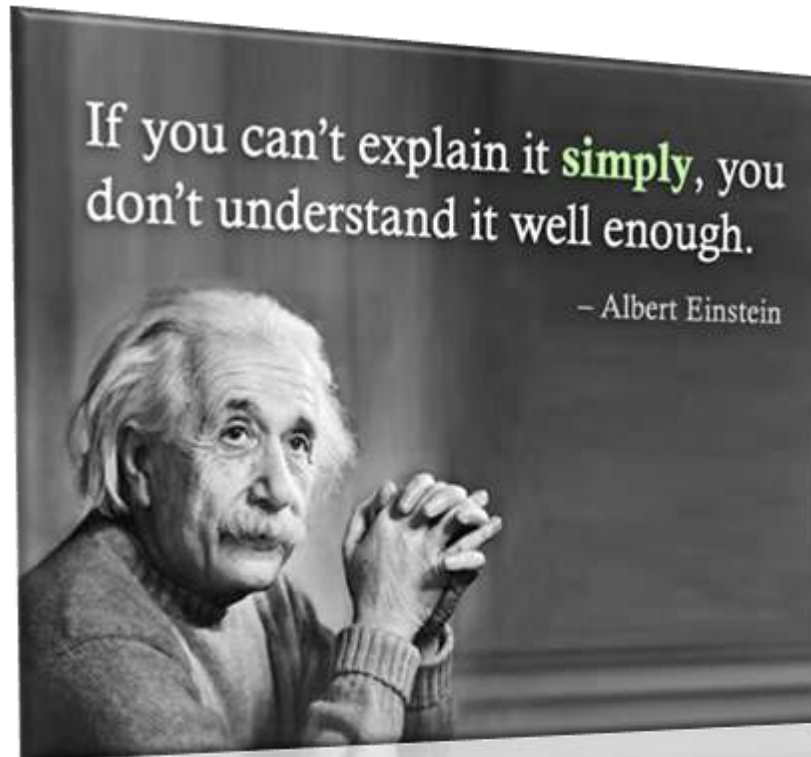
Writing Clarifies Thinking

- Writing helps us capture and define our thoughts
- Thoughts become intelligible when they are crafted into words and sentences
- *“Writing and learning and thinking are the same process.”*
 - William Zinsser



Understanding and Writing

- If we cannot articulate an idea or concept, then we have not clearly understood the idea or concept



Forms of Writing that Support Thinking

- Notebook for recording ideas
- Progress Report
 - *Written summary of work-to-date*
- Written Essay
 - *Formal discussion & critical evaluation of findings & ideas*
- In Sciences ...
 - *MS Thesis*
 - *Research Paper*
 - *PhD Dissertation*

*Goals achieved
Trends detected
Next steps*



Writing Misconceptions

- *“I need to have the idea fully conceived and developed before I begin writing”*
- Initial drafts DO NOT need to be perfect!!!!



Mozart



Beethoven

Writing Misconceptions

- *“I have to be in the right mindset for writing”*
 - Energetic
 - Inspired
 - Creative
 - Clear
 - Zen
- **If you wait to write until conditions are perfect, you will rarely write!**



Writing Misconceptions

- Research papers tell a story
- *“Presentation of research results in a scientific paper must reflect actual sequence of experiments.”*
- The organization of the results reflects the story you want to tell

Improve your writing by READING

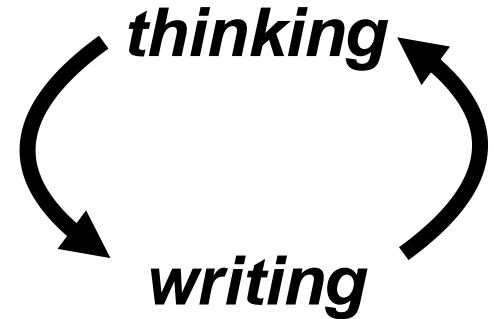


The
New York
Times



Improve your writing by **WRITING**

- Begin writing as you develop/think about your ideas
- Write 30 – 60 minutes everyday
 - Clarifies thinking
 - Generates new ideas
 - Helps with writing becoming independent
 - Helps you become more efficient



Write Everyday – Additional Considerations

- Set aside sufficient time



- Get sufficient sleep



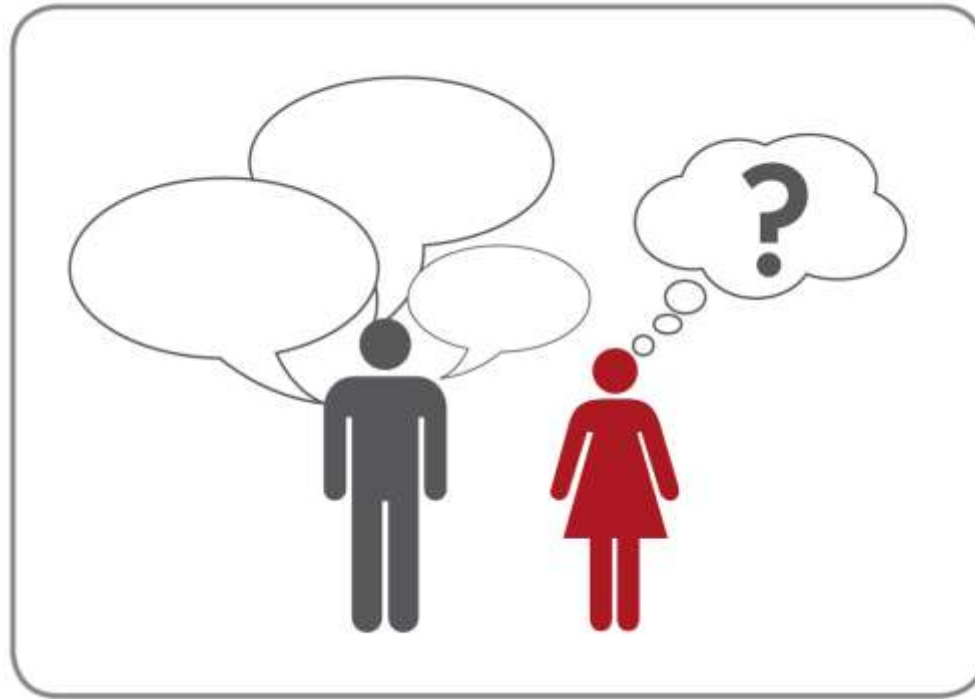
Writing for Understanding

"The single biggest problem in communication is the illusion that it has taken place."

-George Bernard Shaw

Writing for Understanding

- Write/speak with the reader/hearer in mind



Ineffective Communication

- Failure to recognize the readers'
 - Needs
 - Wants
 - Reading processes
 - Styles
- Failure to include sufficient content
- Failure to organize and sequence the information so that readers can understand the message and make appropriate decisions

In-Class Activity

- ***What is your research/work about?***
- At a conference in your field, the person sitting next to you (a fellow scientist in your field) asks:
 - “*So, what is your research about?*”
- Compose a response to this question
 - Your answer should be clear and satisfactory to the class

Purpose of Scientific Publications

- **Record**

- Make an accessible written record of experimental methods, results, conclusions

- **Inform**

- Communicate new information, connect with existing information

- **Educate**

- Instruct, train reader (e.g., student) in a scientific field

- **Persuade**

- Cause or convince someone through reasoning or argument about a belief or course of action

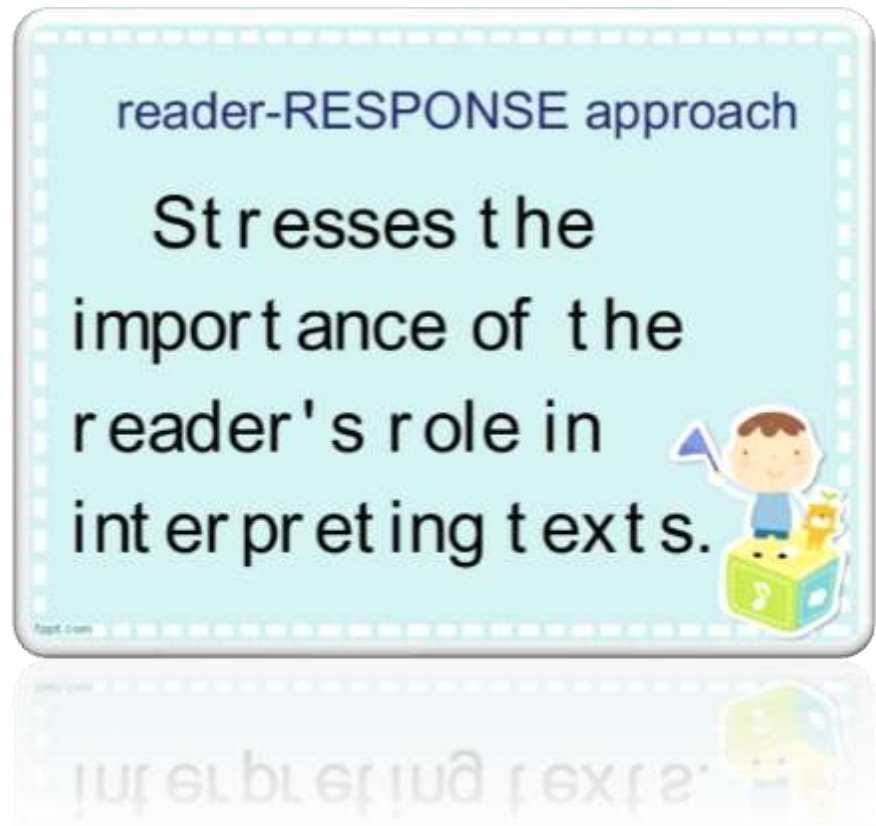
Purpose of Scientific Publications

- Lab notebook?
- Work-in-progress report?
- Research article?
- Review article?
- Grant proposal?
- Textbook?
- Press release?

***Writer-centered or
reader-centered?***

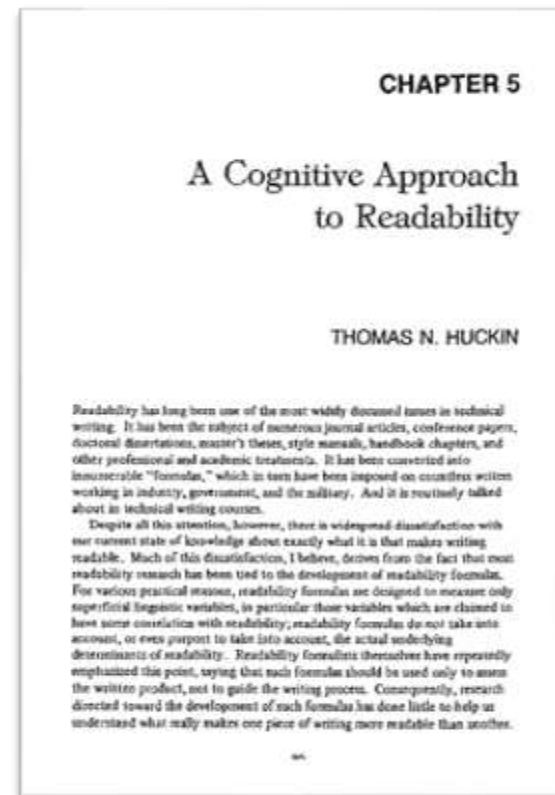
Reader-Centered Texts

- Qualities of reader-centered texts:
 - Clarity
 - Usefulness
 - Persuasiveness



Reader-Centered Texts – Readability

- Huckin's key characteristics of readability:
 - Ease of understanding
 - Ease of recall
 - Ease of reading
- Available on BeachBoard
- READ!



Reader-Centered Texts

- What is my goal?

- Key questions to ask before writing:
 - What is the purpose or goal of my writing?
 - Who is my intended audience?
 - What is the ultimate form of the writing? (journal, newsletter, blog, poster, oral presentation, etc.)

Reader-Centered Texts

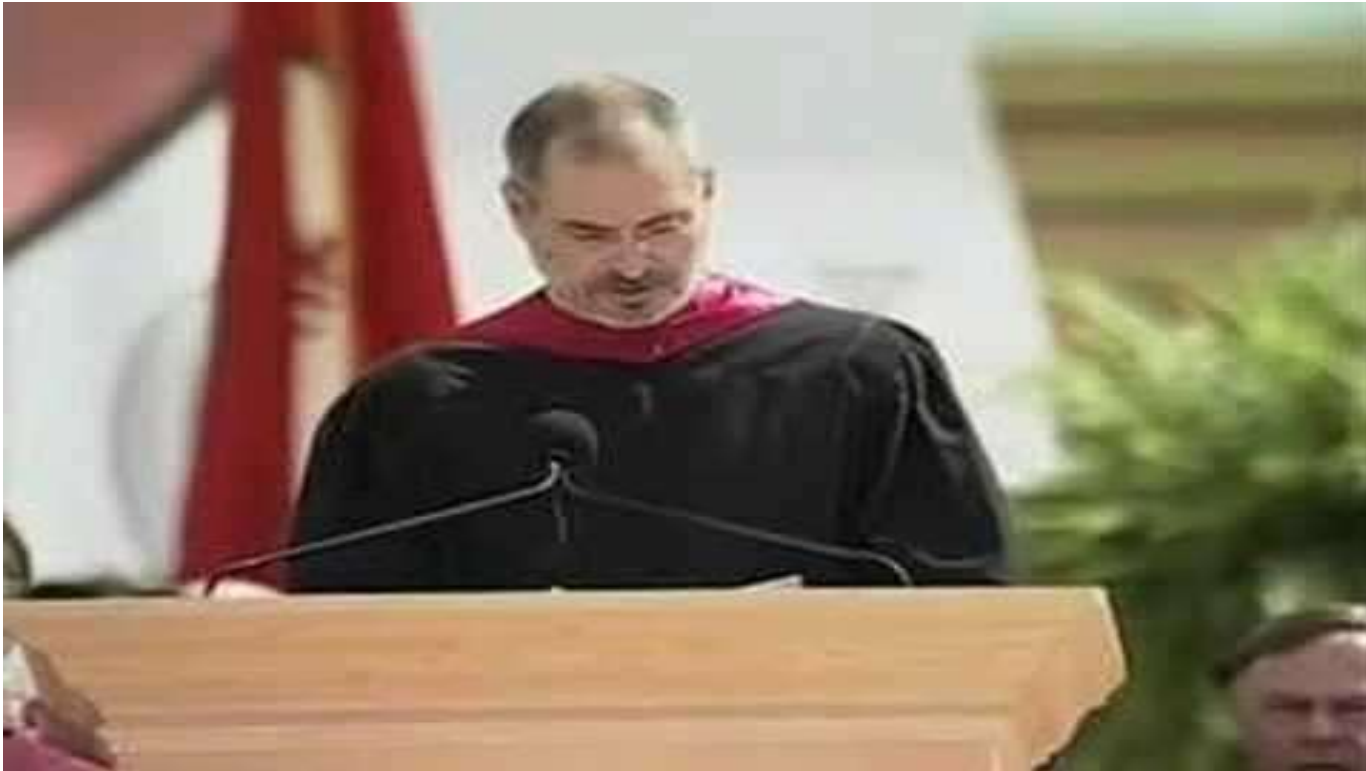
- Key questions to ask before writing:
 - Who is my reader?
 - What is my reader's purpose? (Why is this person reading my stuff?)
 - What information does my reader want?
 - How will my reader use this information?

Reader-Centered Texts

- Who is my reader?
- Usually, scientists write for other scientists
 - High demand for preciseness, accuracy
 - Generally, scientific reading is more careful, exacting, *qualifying*, than other types of reading/writing



Capturing the Readers Attention



Steve Jobs, 2005 Commencement Address at Stanford University: "Truth be told, I never graduated from college, and this is the closest I've ever gotten to a college graduation. **Today, I want to tell you three stories from my life.** That's it, no big deal—just three stories. The first story is about connecting the dots. I dropped out of Reed College after the first six months, but then stayed around as a drop-in for another eighteen months or so before I really quit. So why'd I drop out? It started before I was born."

— Story, with a seamless transition into his speech.

In-Class Activity

- ***“So, what is your research/work about?”***
- At a dinner party, the person sitting next to you (a non-scientist) asks: *“So, what is your research/study about?”*
- Compose a response to this question.
 - Your answer should be clear and satisfactory to your dinner companion
 - Be as descriptive as possible, but avoid jargon and terms that a non-scientist would not know

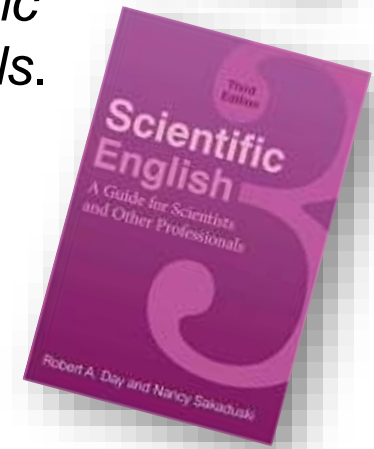
Preparing a Résumé/CV & Cover Letter

ENGR 361: *Scientific Research Communication*

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References

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Scientific Research Communication



Résumé / Curriculum Vitae (CV)

- What is a Résumé?

- The goal of a résumé is to construct a professional identity
- Snapshot of the professional attributes you will bring to a particular position
- Typically the first contact an employer has with a potential employee
 - Serves as your personal introduction
- Limit your résumé to one page?



Résumé / Curriculum Vitae (CV)

- What is a CV?
 - The goal of a CV is to construct a scholarly identity
 - Reflects your abilities as a teacher, researcher, & publishing scholar within your discipline
 - CV's are generally longer

<https://www.themuse.com/advice/cv-vs-resumehere-are-the-differences>

Preparing Résumé/CV

- Before you design and prepare your résumé, look at as many samples as possible
 - Search with Google...
 - NCRW (Nationally Certified Résumé Writer)

- Prepare a résumé that presents the most persuasive case to your target employers
 - How do you do this???

Preparing Résumé/CV



"Your resume says you
spent 'fore years at collej.'"

Résumé/CV Example

MARISSA MAYER

Business Woman & Proud Geek

✉ mmayer@yahoo-inc.com 📍 Address, Street, 00000 County 📍 Sunnyvale, CA
🌐 marissamayr.tumblr.com/ 📱 @marissamayr 🌐 linkedin.com/in/marissamayr



EXPERIENCE

President & CEO

Yahoo!

📅 July 2012 - Ongoing 📍 Sunnyvale, CA

- Led the \$5 billion acquisition of the company with Verizon - the entity which believed most in the immense value Yahoo! has created
- Acquired Tumblr for \$1.1 billion and moved the company's blog there
- Built Yahoo!'s mobile, video and social businesses from nothing in 2011 to \$1.6 billion in GAAP revenue in 2015
- Tripled the company's mobile base to over 400 million monthly active users and generated over \$1 billion of mobile advertising revenue last year

Vice President of Location & Services

Google

📅 Oct 2010 - July 2012 📍 Palo Alto, CA

- Positioned Google Maps as the world leader in mobile apps and navigation
- Overseen 1000+ engineers and product managers working on Google Maps, Google Places and Google Earth

Vice President of Search Products & UX

Google

📅 2005 - 2010 📍 Palo Alto, CA

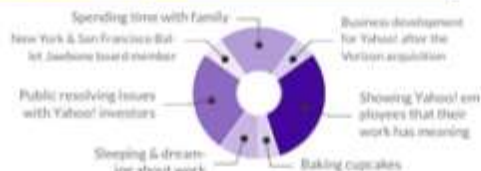
Product Manager & UI Lead

Google

📅 Oct 2001 - July 2005 📍 Palo Alto, CA

- Appointed by the founder Larry Page in 2001 to lead the Product Management and User Interaction teams
- Optimized Google's homepage and A/B tested every minor detail to increase usability (line, spacing between words, color schemes and pixel-by-pixel element alignment)

A DAY OF MY LIFE



LIFE PHILOSOPHY

"If you don't have any shadows, you're not standing in the light."

MOST PROUD OF

🏆 **Courage I had**
To take a sinking ship and try to make it float

💖 **Persistence & Loyalty**
I showed despite the hard moments and my willingness to stay with Yahoo! after the acquisition

📈 **Google's Growth**
from a hundred thousand searches per day to over a billion

👩 **Inspiring women in tech**
Youngest CEO on Fortune's list of 50 most powerful women

STRENGTHS

Hard-working (18/24) Persuasive
Motivator & Leader

UX Mobile Devices & Applications
Product Management & Marketing

LANGUAGES

English ●●●●●
Spanish ●●●●●
German ●●●●●

EDUCATION

M.S. in Computer Science
Stanford University

📅 Sept 1997 - June 1999

B.S. in Symbolic Systems
Stanford University

📅 Sept 1993 - June 1997

■ Thoughts?

■ Picture?

■ Sufficient Detail?

Preparing Résumé/CV

- The average hiring manager spends **6** seconds reading a résumé (<https://www.glassdoor.com/blog/scanning-resumes/>)
 - Only moments to make a lasting impression and make sure your résumé lands in the “Yes” pile as opposed to the “Rejected” stack
- Make sure your Résumé is:
 - Organized
 - Carefully designed
 - Consistent in formatting
 - Free of errors
 - Generates interest

Your Name
Profession:
City, State

your.name@company.com
442-666-3333
www.your-website.com

SUMMARY
Lorem ipsum dolor sit amet, consetetur elipiscing est, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

WORK EXPERIENCE

Job Title
Company Name, Location
Jan 2012 - Dec 2012

Facilisis et quidem est, inquam. Sit kusan mollam dicitur, ad aliquid non unum partum vllum consuetudo Latina traherent.

- Hoc sit emporium dicitur est superlati, hanc enim videtur periculis, ut, fa idam, misticque natio, quam virtutis via gravitatisque postulat.
- Et quidem kure variat, sed bahen non gravissimum est, sedimorum multitudinis, hanc qui modo conveniant, non sane misticque.
- Nam bonum ex quo appetitum sit, hanc, praepositum ex eo credo, quod praeparatur est.

EDUCATION

Degree
School Name, Location
2012 - 2013

ADDITIONAL INFORMATION

Quid si fa se habet, non possit, beatorum praestare vitam sapientia. Sit videmus, quae si te de emissa dicta sunt.

- Duo enim genera quae sunt, hanc sita tempore, alio genere, nunquam fides, Claudi apditi qui tum erat summo ne impeto, dederunt.
- Quod enim utilitatem ipsum contemnerunt, si adit dicitur, de occupantem manas non antepone.

Preparing Résumé/CV

- The content should:
 - Emphasize key knowledge, skills and attributes you posses (when possible mirror those the employer is looking for in a candidate)
- Highlight your strengths

Your Name		your.name@example.com 111-222-3333 www.your-website.com
Profession City, State		
SUMMARY	Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.	
WORK EXPERIENCE	Job Title Company Name, Location Jan 2013 – Dec 2013 Facillimum id quidem est, inquam. Sin kakan malitiam dixisses, ad aliud nos unum certum vitium consuetudo Latina traduceret. <ul style="list-style-type: none">• Hoc sic expositum dissimile est superiori. Haec mihi videtur delicatior, ut ita dicam, molliorque ratio, quam virtutis vis gravitasque postulat.• Et quidem iure fortasse, sed tamen non gravissimum est testimonium multitudinis. Haec quo modo convenient, non sane intellego.• Nam bonum ex quo appellatum sit, nescio, praepositum ex eo credo, quod praeponatur aliis.	
EDUCATION	Degree School Name, Location 2013 – 2013	
ADDITIONAL INFORMATION	Quod si ita se habeat, non possit beatam praestare vitam sapientia. Illa videamus, quae a te de amicitia dicta sunt. <ul style="list-style-type: none">• Duo enim genera quae erant, fecit tria. Immo alio genere: Numquam facies. Claudii libidini, qui tum erat summo ne imperio, dederetur.• Qui enim voluptatem ipsam contemnunt, is licet dicere se acupenserem maenae non antepondere.	

Preparing Résumé/CV

- The layout & design should be:
 - Attractive
 - Uncluttered
 - Easy to read
 - Consistent

Your Name		your.name@example.com 111-222-3333 www.your-website.com
Profession City, State		
SUMMARY	Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.	
WORK EXPERIENCE	Job Title Company Name, Location Jan 2013 – Dec 2013 Facillimum id quidem est, inquam. Sin kakan malitiam dixisses, ad aliud nos unum certum vitium consuetudo Latina traduceret. <ul style="list-style-type: none">• Hoc sic expositum dissimile est superiori. Haec mihi videtur delicatior, ut ita dicam, molliorque ratio, quam virtutis vis gravitasque postulat.• Et quidem iure fortasse, sed tamen non gravissimum est testimonium multitudinis. Haec quo modo convenient, non sane intellego.• Nam bonum ex quo appellatum sit, nescio, praepositum ex eo credo, quod praeponatur aliis.	
EDUCATION	Degree School Name, Location 2013 – 2013	
ADDITIONAL INFORMATION	Quod si ita se habeat, non possit beatam praestare vitam sapientia. Illa videamus, quae a te de amicitia dicta sunt. <ul style="list-style-type: none">• Duo enim genera quae erant, fecit tria. Immo alio genere: Numquam facies. Claudii libidini, qui tum erat summo ne imperio, dederetur.• Qui enim voluptatem ipsam contemnunt, is licet dicere se acupenserem maenae non antepone.	

Preparing Résumé/CV

- Organization
 - Heading
 - Areas of Interest
 - Education
 - Professional Experience
 - Honors
 - Publications
 - Patents
 - Teaching
 - Service
 - Professional Development
 - References

MOLLY LARSON
349 Ball Road, Hillwood, NY 10458 | T: 555.322.7332 example-email@example.com

Summary
Highly motivated Firefighter and EMT with over 9 years of experience. Dedicated to fire prevention, protection, and safety. Certified and trained professional with extensive knowledge of safety procedures, applicable codes, and fire fighting techniques. Adept and providing aid to individuals of disasters including building fires and car wrecks. Effective at quickly assessing situations and responding with effective solutions. Solid reputation for superior performance, accuracy, and decision making ability.

Highlights

- Fire prevention expert
- Safety conscious
- Strategic planner
- Excellent leader
- Fluent in Spanish
- Team player
- Resourceful
- Critical thinker
- Skilled problem solver
- Medical terminology knowledgeable

Experience

Firefighter and EMT
Hillwood Fire Department — Hillwood, NY
May 2006 to Current

- Control, contain, and extinguish fires.
- Answer emergency situations quickly, assess conditions, and act appropriately to contain fires, assist victims, and prevent escalation.
- Administer first aid and artificial respiration to those adversely affected or injured by fire, smoke, or trauma.
- Assess patient needs and provide life support services during medical emergencies.
- Maintain updated knowledge of safety guidelines, fire fighting techniques, treatment protocols, response requirements, and quality assurance procedures.
- Inspect buildings as required for regulatory compliance and safety.
- Assist with equipment maintenance and upkeep.
- Act as site leader as needed to supervise activities of up to 12 responders.

Firefighter and EMT
Albany Fire Department — Albany, NY
May 2004 to May 2006

- Maintained a state of readiness and alertness for all assignments.
- Rapidly assessed whether life threatening criteria was present and took immediate action.
- Operated and maintained emergency vehicles in a safe, efficient manner while obeying all traffic laws.
- Completed all mandatory education and training classes.
- Worked 24 hour shifts and responded to on-call situations as needed.

Specialized Training

Fire Science Training Program
New York State Academy of Fire Science — Albany, NY
2004

Emergency Medical Technician Training
Albany Community College — Albany, NY
2003

Certifications
State of New York Firefighter and EMT Certifications

Preparing Résumé/CV

■ Organization

- Any number of organizational patterns can be effective
- Use a strategy that will strengthen your résumé
- Use reverse chronological sequence in the education and employment sections



Preparing Résumé/CV

- **CV**
- The goal of a CV is to construct a scholarly identity
- The CV will need to reflect your abilities as a teacher, researcher, and publishing scholar within your discipline

Harvard Medical School Curriculum Vitae

Date Prepared: 10/30/2009
Name: Mario Fernando Rubin
Office Address: Massachusetts General Hospital
165 Cambridge Street
Suite 302
Boston, MA 02114
Home Address: One Longfellow Place # 1118
Boston, MA 02114
Work Phone: (617)-726-9023
Work E-Mail: mfrubin@partners.org
Work FAX: (617)-726-5676
Place of Birth: Rosario, Santa Fe, Argentina

Education

03/1965-12/1969	Bachiller Nacional Summa Cum Laude	General Studies	Colegio Nacional No. 2, Argentina
03/1970-10/1975	Doctor of Medicine Summa Cum Laude	Medicine	Facultad de Ciencias Medicas de la Universidad Nacional de Rosario, Argentina

Postdoctoral Training

01/1976-03/1977	Intern	Internal Medicine	Facultad de Ciencias Medicas de la Universidad Nacional de Rosario, Argentina
07/1977-06/1978	Intern	Internal Medicine	Suburban Hospital
07/1978-06/1979		Resident	Internal Medicine Providence Hospital
07/1979-06/1981	Clinical Fellow	Nephrology	Georgetown University

Preparing Résumé/CV

Experience Descriptions

- Gapping

- Use of incomplete sentences to present your information as clearly and concisely as possibly
- "I taught composition for four years, during which time I planned classes and activities, graded papers, and constructed exams. I also met with students regularly for conferences."

Preparing Résumé/CV

Experience Descriptions

- "I taught composition for four years, during which time I planned classes and activities, graded papers, and constructed exams. I also met with students regularly for conferences."

versus

- "Composition Instructor (2000-2004). Planned course activities. Graded all assignments. Held regular conferences with students."

- Cut out unnecessary words
- Allow your reader to view your accomplishments

Preparing Résumé/CV

Experience Descriptions – Parallel Structures

- My degree, my work experience, and ability to complete complicated projects qualify me for the job.
- My degree, my work experience, and my ability to complete complicated projects qualify me for the job.

Preparing Résumé/CV

Experience Descriptions – Parallel Structures

- Prepared weekly field payroll
 - Managed material purchasing, expediting, and returning
 - Recording OSHA regulated documentation
 - Change orders
 - Maintained hard copies of field documentation
-
- Prepared weekly field payroll
 - Managed material purchasing, expediting, and returning
 - Recorded OSHA regulated documentation
 - Processed change orders
 - Maintained hard copies of field documentation

Preparing Résumé/CV

Proofreading

- Mistakes may eliminate you from consideration
- Verify all information and have someone else review it
- For a hard copy use a quality printer and high grade paper ??

Proofreading

- ✓ Spelling, grammar and typing mistakes eliminated
- ✓ Consistent language and formatting
- ✓ Perfects already good writing
- ✓ Ensures a publication-ready document
- ✓ Cheaper than editing

Preparing Résumé/CV

Ethics

- Be Truthful & Honest



Résumé /CV

- Early Résumé
- CV
- Updated Résumé
- LinkedIn

Cover Letter

Yes, my dear, it's true,
you really should
submit a cover letter
with your resume even
if it's not required.



Preparing Cover Letter

- The application cover letter is a sales letter in which you market your skills, abilities and knowledge
- Your letter must be persuasive (1 page)

John Donaldson
8 Sue Circle, Smithtown, CA 08067 · 909-555-5555 · john.donaldson@emailexample.com

September 1, 2018

George Gilhooley
Times Union
87 Delaware Road
Hatfield, CA 08065

Dear Mr. Gilhooley,

I am writing to apply for the programmer position advertised in the Times Union. As requested, I enclose a completed job application, my certification, my resume and three references.

The role is very appealing to me, and I believe that my strong technical experience and education make me a highly competitive candidate for this position. My key strengths that would support my success in this position include:

- I have successfully designed, developed and supported live-use applications.
- I strive continually for excellence.
- I provide exceptional contributions to customer service for all customers.

With a BS degree in Computer Programming, I have a comprehensive understanding of the full lifecycle for software development projects. I also have experience in learning and applying new technologies as appropriate. Please see my resume for additional information on my experience.

I can be reached anytime via email at john.donaldson@emailexample.com or by cell phone, 909-555-5555.

Thank you for your time and consideration. I look forward to speaking with you about this employment opportunity.

Sincerely,

John Donaldson

Preparing Cover Letter

- Cover Letters serve as your personal introduction
 - Provoke interest in the recruiters by describing how your skills can contribute to their organization
- Cover Letter needs to accomplish four tasks
 - Why I am writing
 - How I am qualified
 - Why I am right for the job
 - The next steps to make sure we talk further about my qualifications

Preparing Cover Letter

Opening

- Refer to the job ad
 - Provide context by indicating how you heard about the position and name the specific job title
 - Show enthusiasm by explaining why you are interested in the job
- Mention company contact
- Research the company
 - Demonstrate your initiative as well as your knowledge about the organization by relating your interest to some facet of the organization
- Preview qualifications

Preparing Cover Letter

Body

- In the middle paragraphs use specific examples to demonstrate that you are qualified for the job
- Prove claims with examples
 - Limit the content by focusing on one basic point clearly stated in the topic sentence
- Tie qualifications to the requirements of the position
- Detail your experience

- Do not just repeat from your résumé, explain how you can make a valuable contribution

Preparing Cover Letter

Closing

- Make your final pitch
- Refer to Résumé
- Offer to meet for an interview
- Let the reader know how to reach you by including your phone number and email address (should be in a footer or header)
- End with a statement of good will

Résumé/CV & Cover Letter

Effective Communication

- Good organization
 - Main idea first and then any necessary details
- Audience awareness
 - Messages must focus on the needs of a specific audience
- Clarity
 - Writing is simple and clear
- Conciseness
 - Writing is only as long as it needs to be
- Courtesy
 - Never acceptable to be insulting
- Correctness
 - Provide accurate information & use good grammar & spelling

Résumé/CV & Cover Letter

Effective Communication

- Consider your Social Media Foot Print



Résumé/CV & Cover Letter

Soft Skills

- Soft Skills
 - Personal attributes you need to succeed in the workplace
- Communication Skills
- Critical Thinking
- Leadership
- Positive Attitude
- Teamwork
- Work Ethic



Cover Letter

- Sample Letter

In-Class Activity

Résumé/CV & Cover Letter Preparation

- Write your name and date
- To prepare your résumé and Cover Letter for a specific opportunity, consider and answer the following questions:
 - Who is my reader?
 - What is my reader's purpose?
 - What information does my reader want?
 - What will the reader do with this information?
- Why am I interested in this opportunity?
- How will this opportunity help me in the future?
- What are my skills and strengths, and how are they a good match?
- How can I contribute to the organization?

Assignment 2

- **Prepare Résumé/CV and cover letter for a specific position or purpose. Use the Handbook of Technical Writing text for reference (pages 114 – 115 & 484 – 502).**
- Submit the following:
 - the position or purpose description (described in Assignment 2 document on BB)
 - the preparation exercise (described in Assignment 2 document on BB)
 - a one-page cover letter
 - a one-page résumé or a CV (multiple pages accepted for CV)
- Submit ONLY electronic copies (*.docx or *.pdf) in the DropBox folder on BeachBoard
- **You will be graded on submission of all completed documents by the assigned deadline, and on the quality of your work (readability, spelling, syntax, and aesthetics).**

