THE PATHWAY FROM
EDUCATION TO VOCATION

Becoming a Difference Maker in
COMPUTER SCIENCE

Why Study Computer Science at Azusa Pacific University?

Computer Science is an exciting, challenging, and growing field that impacts the world and everyday life in countless ways. Computer Scientists are involved in creating technology that is used in a wide range of fields including medicine, technology, communications, entertainment, gaming, manufacturing, business, and the natural sciences. Computer Science research pushes the state-of-the-art in computational theory and practice, and leads to new technologies that revolutionize the world, such as cell phones, social media, the internet, and much more. Every school, small business, tech startup company, non-profit organization, government agency, and global corporation alike depend on technological advances made by Computer Scientists, meaning Computer Scientists can truly enter any field or pursue any passion imaginable with their skillset.

The undergraduate program at APU is designed to combine breadth in practical and theoretical computer science with depth in specialized areas, while providing students with socially responsible and rewarding projects to apply their developing skillset to enrich communities both locally and globally. Course content covers a range of traditional and advanced topics such as algorithms, artificial intelligence, databases, distributed systems, networks, operating systems and programming languages. Meanwhile, rigorous coursework is accompanied with opportunities to work on meaningful digital microfluidic research, an emerging lab-on-a-chip technology offering the potential to yield affordable, clinical diagnostic solutions for the third-world. Among other research opportunities, Computer Science students aid APU Neuroscientists in understanding the brain by programming 3D environments for state-of-the-art virtual reality technologies such as the Oculus Rift. Students are given an ever-expanding list of opportunities to develop their skills through community projects; for example, students may utilize new Computer Science knowledge to serve parents and students in Azusa's local school district through a service learning course, or even earn course credit to work on and deploy technical, socially-impactful, international, collaborative programming projects with Computer Science students and professors in Sub-Saharan Africa.

AZUSA PACIFIC
UNIVERSITY

YOU MIGHT CONSIDER A COMPUTER SCIENCE MAJOR IF YOU:

- Like observing, learning about, and analyzing the world around you

- Enjoy math or are musically inclined

- Like strategy games such as chess, checkers, or computer games

- Enjoy mental challenges and problem solving

- Like fixing things and pulling things apart to see how they work

- Like optimizing and making things better

- Like building and/or designing

- Like solving puzzles and problems

- Like imagining how technology can improve other fields

THOMAS MIFFLIN '13
Software Engineer
Boeing

Thomas develops software and administers government systems and hardware for programs within the Department of Defense. He couldn't divulge more details due to the nature of his work and the security clearance required, but describes it as "pretty cool stuff."

"I use many of the skills I learned while an undergrad at APU; I would not be where I am today without the guidance and tutelage of my professors."

MELISSA STURGEON '02
Business Analyst Lead
Azusa Pacific University

As the Business Analyst Lead at APU, Melissa maintains financial systems and investigates business processes to leverage new technologies. She also assists with technology enhancements that improve workflow efficiencies.

"Get involved in as much as you can in any activity on campus related to your major. Anything you do can lead to a job."

COMPUTER SCIENCE MAJORS ARE PREPARED FOR:

- Applying general problem-solving techniques to specific problems

- Consideration of the ethical implications of technological advancements

- Entering the high-tech industry and succeeding

- Identifying world-wide social-impact problems and offering realistic solutions

- Connecting theory and practice

- Critical reflective thinking

- Personal and civic responsibility

- Developing good working relationships with others

- Demonstrating good listening

- Demonstrating tolerance and self-regulation

- Understanding and creating real-world project requirements & specifications

GRADUATES IN COMPUTER SCIENCE WORK AS:

- Video game programmers
- Embedded systems programmers
- Computer animators
- Database specialists
- Cryptanalysts
- Telecommunications engineers
- Electrical engineers
- Software developers/engineers
- Robotics engineers
- Computer science teachers and professors
- Back-end web-developers
- Military intelligence specialists
- Computer programmers

*Many of these careers may require additional training and/or graduate education
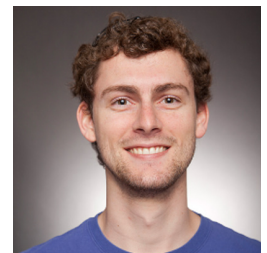
SEAN RADAK '11
Senior QA Lead
Pocket Gems

Sean helped create multiple champions and new features in the game "League of Legends." During this time, he managed a team of five Analysts and Test Engineers. Now he is the head of QA for a game still in development.

"Do the job you want to have, before someone pays you to do it."

To connect with these and other APU alumni, email clasalumni@apu.edu

STEPS TO TAKE AS A MAJOR IN COMPUTER SCIENCE	OPTIONS TO EXPLORE AROUND APU

BE CALLED.
EXPLORE. DEFINE. RESEARCH. LEARN.

- **TAKE INTRODUCTION TO COMPUTER SCIENCE (CS 220)**
  Explore what computer scientists do by taking a fun, introductory programming course.

- **ATTEND A ROBOTICS CLUB MEETING**
  Visit a Robotics Club meeting (no skill required) to see what fun and exciting robotics projects our students are developing with industry partners and/or for personal interst.

- **LEARN HOW TO APPLY YOUR STRENGTHS WITHIN YOUR ACADEMICS, LIFE, AND CAREER**
  Meet with a Career Consultant* or Strengths Mentor.

- **CONSIDER CAREER OPTIONS FOR YOUR MAJOR**
  Meet with a Career Consultant* or your faculty advisor to explore and discuss requirements for your career options.

BE PREPARED.
IDENTIFY. STRENGTHEN. PRACTICE.

- **ATTEND A COMPUTER SCIENCE CAREER NIGHT**
  Come and listen to industry partners and former Alumni as they share insights about how to prepare yourself for the technology industry.

- **ATTEND A SUMMER SERVICE TRIP WITH THE DEPARTMENT**
  Collaborate with universities around the world in developing computer programs and solutions which lead to positive social impact in third-world communities.

- **COMPETE IN AN ACM PROGRAMMING COMPETITION**
  Compete in the regional ACM programming competition against dozens of other southern California schools to help increase your problem-solving skills and measure yourself against top regional programmers.

- **SECURE AN INTERNSHIP**
  Start planning to apply for internships during junior year. Many students get jobs with the same company they interned with. Benefits include:
  - Gain the real-world experiences that all employers seek
  - Promote exposure to various fields in computing
  - Help build your professional network
  - Great resume boost

- **RECEIVE FEEDBACK ON YOUR INTERVIEWING ABILITIES**
  Complete a Mock Interview with a Career Consultant*

- **CREATE A RESUME TO APPLY FOR AN INTERNSHIP**
  Meet with a Career Consultant* to review your resume and cover letter. Run them by your professors, too.

- **GROW YOUR SKILLS IN AN ON CAMPUS JOB OR STUDENT LEADERSHIP POSITION**
  Talk to Student Employment or Student Life about the available opportunities.

- **VOLUNTEER LOCALLY AND GLOBALLY TO SHAPE YOUR PERSPECTIVE**
  Talk to the Center for Student Action about how you can serve.

- **GAIN KNOWLEDGE ABOUT YOUR CAREER OPTIONS**
  Do informational interviews or go to a career-related event to learn more about your career, degree, and experience requirements.

BE CONNECTED.
JOIN. NETWORK. BE ACTIVE.

- **JOIN IEEE**
  IEEE is the world's largest technical society. Members gain access to essential technical information, networking opportunities, career development tools, and many other exclusive benefits.

- **JOIN ACM**
  ACM chapter members are eligible to recieve valuable networking tools and industry information.

- **JOIN ROBOTICS CLUB**
  Club activities include programming, robotics and engineering. Provides a solid foundation in object-oriented programming, mechanical engineering, teamwork, and well-developed critical thinking skills.

- **PARTICIPATE IN ZUVENTUREZ**
  ZuVenturez is a training program and business competition held by the School of Business. Form a team, make invaluable connections, and win money from real-life investors to help launch your start-up company idea.

- **TALK TO ALUMNI FROM YOUR MAJOR**
  Join APUConnect.com and start reaching out. You can also email clasalumni@apu.edu[+] for help connecting with alumni.

- **GET ACTIVE ON LINKEDIN**
  Meet with a Career Consultant* to review your profile and learn how to use LinkedIn.

- **ATTEND CAREER-RELATED EVENTS**
  Keep an eye out for career events related to your major or that are happening around campus.

- **HAVE LETTERS OF RECOMMENDATION ON HAND**
  Request them from professors and advisors at least a month before due.

Visit apucareer.youcanbook.me/ to make an appointment with a Career Consultant

[+] Use subject line: Connect me with APU alumni

APPLYING TO GRADUATE SCHOOL

EXPLORE.

REASONS TO GO TO GRADUATE SCHOOL
- YOU WANT TO
- GREATER EARNING POWER
- CHANGE YOUR CAREER
- ENHANCE YOUR EDUCATION
- ADVANCE YOUR CAREER

Learn more at
www.apu.edu/career/graduateschool

SELECT.

ONLINE RESOURCES TO HELP IDENTIFY THE BEST PROGRAM FOR YOU

Peterson's Guide
GradSchools.com
The Princeton Review
National Assoc. of Graduate Professional Students
The Council of Graduate Schools
APU Pew Society
Graduate Guide

EXAMPLES OF SCHOOLS ATTENDED BY APU COMPUTER SCIENCE GRADUATES:

University of Southern California
Portland State University
University of California, Santa Cruz
University of Hawaii
Oregon State University

APPLY.

☐ **APPLICATION FORM AND FEES**
Follow instructions carefully and have one or more people check for errors.

☐ **ENTRANCE ESSAY**
Provide a writing example that shows your personal objectives.

☐ **TRANSCRIPT**
Ask APU to send it directly to the school you are applying to.

☐ **LETTERS OF RECOMMENDATION**
Schools usually require three letters, so get them early.

☐ **INTERVIEWS**
If your potential school requests an interview, treat it as a job interview.

FINDING YOUR CAREER

IDENTIFY.

- Search online job boards and professional associations in the Computer Science field
- Regularly check-in with your organizations of interest and network with those who can inform you of opportunities
- Look on APU Career Network for possible opportunities

COMPUTER SCIENCE ASSOCIATIONS:

American Society for Information Science and Technology
Association for Computing Machinery
Association for Women in Computing
American Society for Engineering Education
Anita Borg Institute for Women and Technology
Association of Information Technology Professionals
The Computing Research Association
The Institute of Electrical and Electronics Engineers Computer Society
Institute for Operations Research and the Management Sciences
Society for Industrial and Applied Mathematics

PREPARE.

BRAINSTORM YOUR EXPERIENCE
What have you done? What is relevant?
▼
TAILOR YOUR RESUME
What does the job description say?
▼
WRITE GOOD BULLET POINTS
Do you focus on your accomplishments?
▼
FORMAT YOUR RESUME
Is it easy to read and follow?
▼
PRACTICE INTERVIEWING
Know yourself.
Know the position.
Know the organization.

RESEARCH OPTIONS

OCCUPATIONAL OUTLOOK HANDBOOK
www.bls.gov/ooh/

O*NET ONLINE
www.onetonline.org

PROFESSIONAL ASSOCIATION REFERENCE
www.weddles.com/associations

NETWORK.

WHO DO YOU KNOW?
WHO DO YOU NEED TO KNOW?

WHY NETWORK?
- Learn about different options in your field
- Research companies and positions of interest
- Find hidden opportunities that are not advertised
- Obtain referrals from those who have influence

EXAMPLES OF COMPANIES THAT HIRE APU COMPUTER SCIENCE GRADUATES:

SpaceX
Boeing
Northrop Grumman
Riot Games
Epic Systems
Qualcomm
Life-Ray
PowerSettlements
Veolia Environment
Logos Bible Software

AZUSA PACIFIC
UNIVERSITY