Application Development BAS

How to Build Skills, Experience, and Instagram

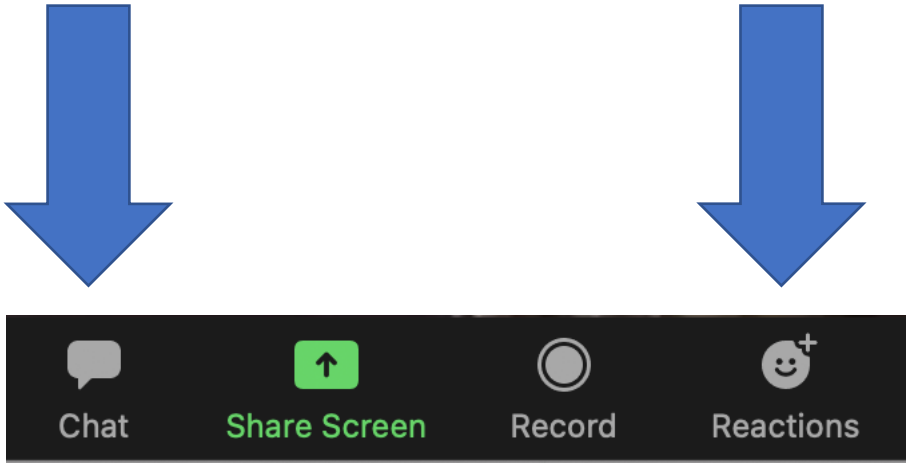
Steve Balo

DISCOVER

SEATTLE COLLEGES

North · Central · South

Questions & Feedback



Also:
This Meeting is Being Recorded
Slides Will Be Available to Download

Introduction

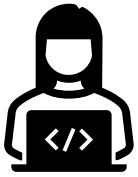
STEVE BALO (he/him)

Technical Employment Program Manager

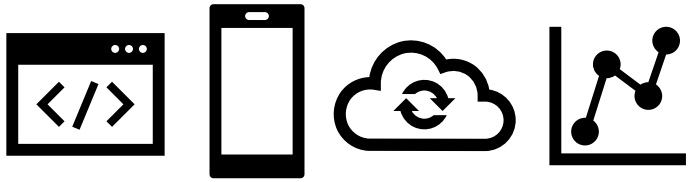
Steven.Balo@seattlecolleges.edu

Application Development BAS

Also known as an Applied Baccalaureate Degree
Start with 90+ credits, complete 2 more years with us to get your Bachelor's Degree



Computer Science Fundamentals



Skills Training in Web, Mobile, Cloud, Data Science

Experience via Project-Based Classes, Internships, and Capstone Projects

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Application Development?

Instagram

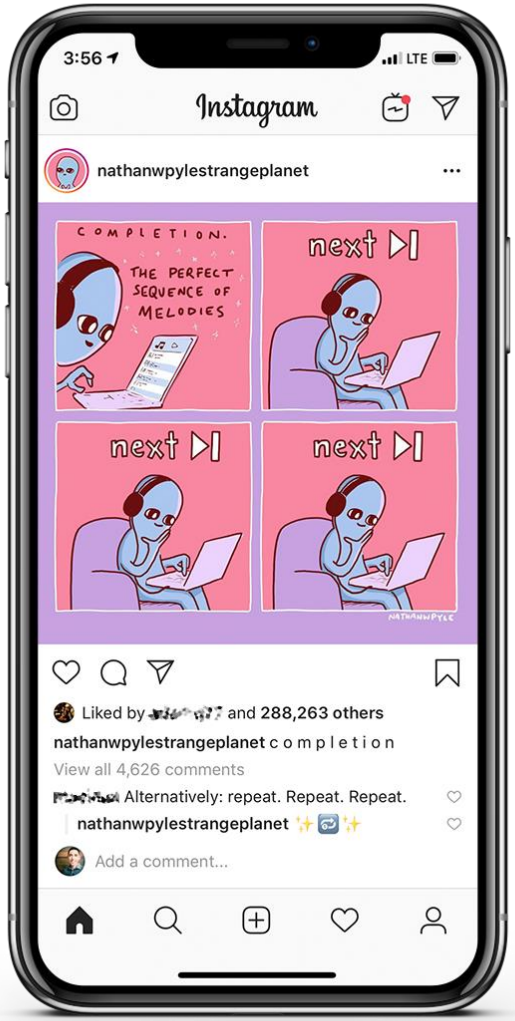
Building Instagram with AD

A. **Mobile App**
B. **Web Service**
C. **Web App**
D. **Cloud Computing**
E. **Data Science**
F. **All of the Above**

Instagram

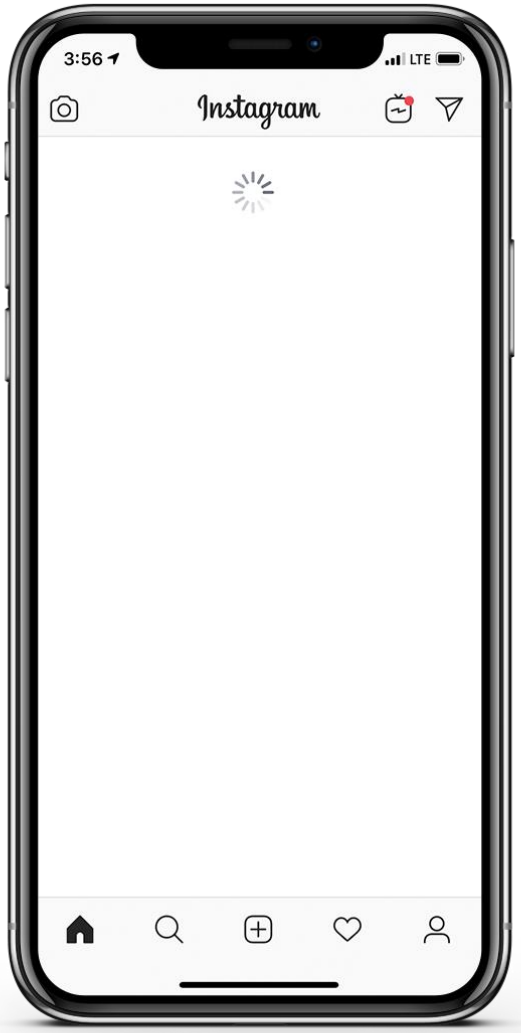
Mobile App?

- iOS or Android application
- Written in using a **software framework** React Native (JavaScript with bits of Swift or Java/Kotlin)



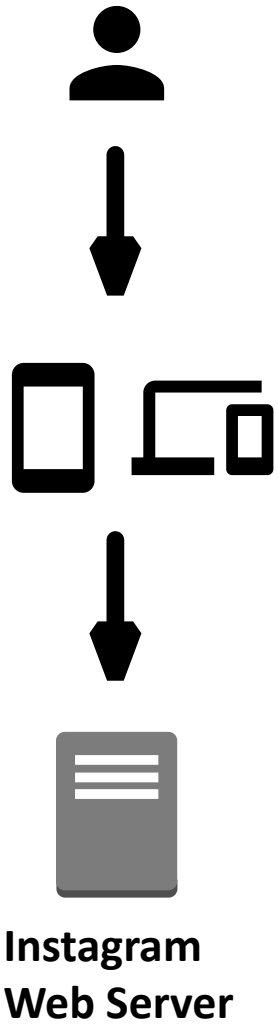
Nope

- How do we put everyone's photos and comments together?
- Use a network and contact a **web service**



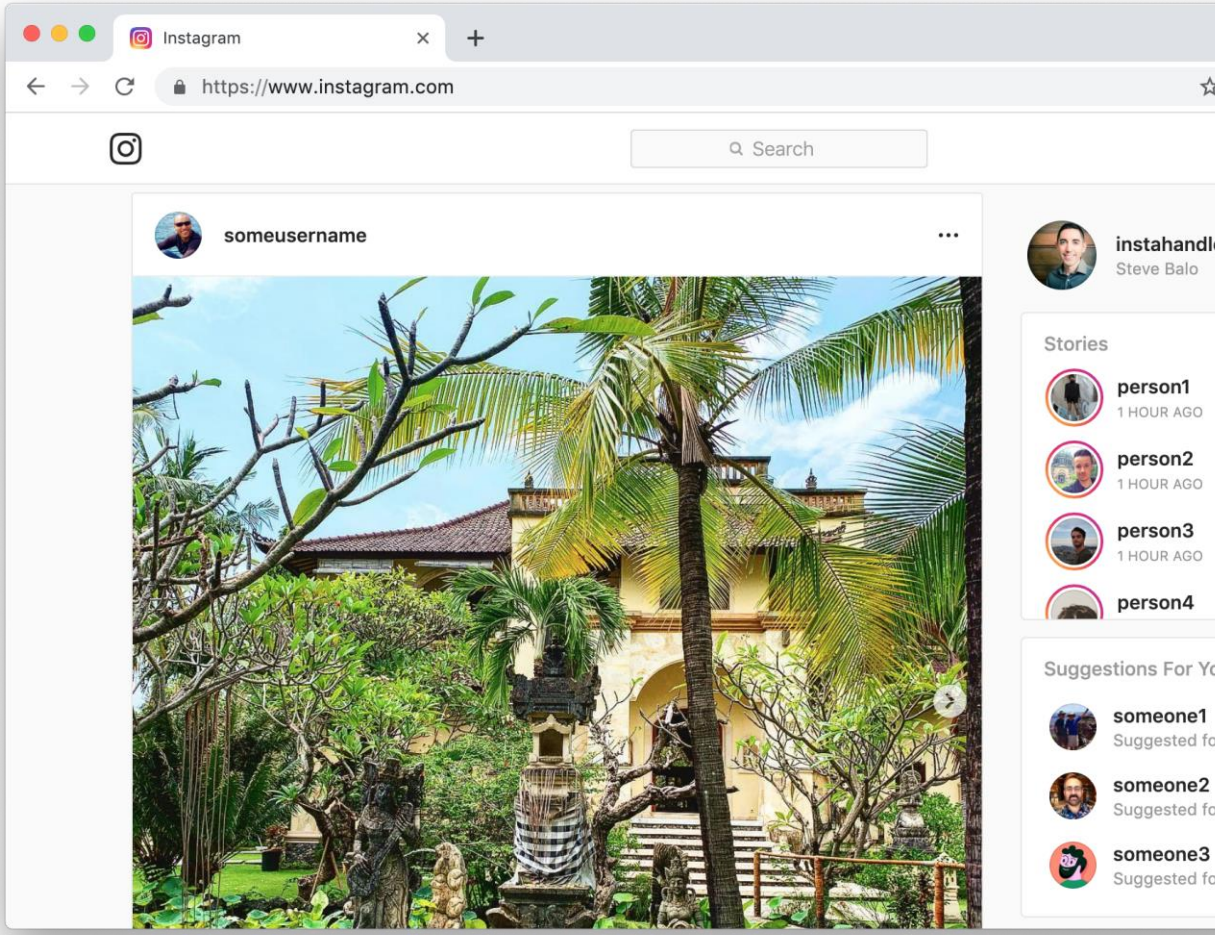
Web Services

- Instagram's mobile app needs somewhere to upload your photos, view your follower's contents, search for hashtags, etc.
- These are sometimes called **Application Programming Interfaces** or APIs…
- They allow remote computers (servers) to store and manipulate the data



Bonus: Web App

- Instagram also offers a pretty feature-rich web app too.
- Just like the mobile app, it uses the Web Services



Mobile/Web App + Web Services?

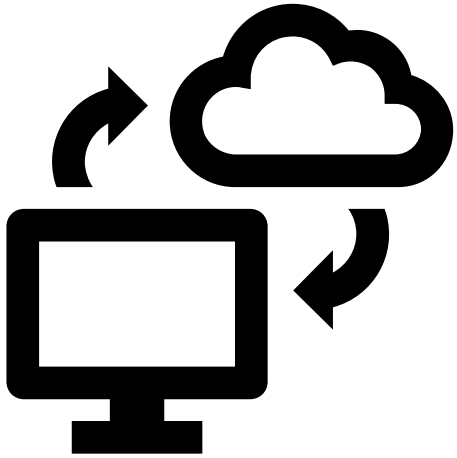
- So the mobile app and web app calls web services on a machine.
- **All done?**

Nope

- Wait… **where** are these web services?
- They need to be on actual machines – and not just one!
- **So does Instagram own (tens of) thousands of special servers?**

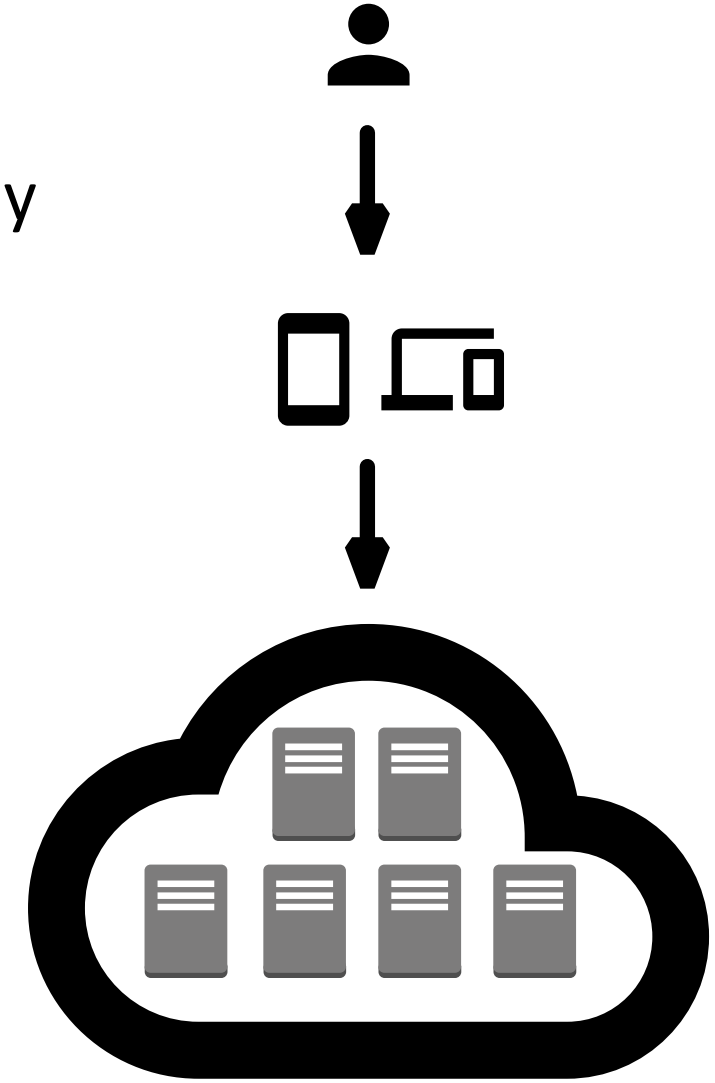
Cloud Computing

- **The cloud is just computers connected to the internet.**
- Amazon (AWS), Google (GCP), and Microsoft (Azure) are the biggest and rent time on their computers for others
- Instagram used to run on Amazon's cloud, but Meta (well, Facebook) migrated them to their own sort of cloud



Web + Mobile + Cloud

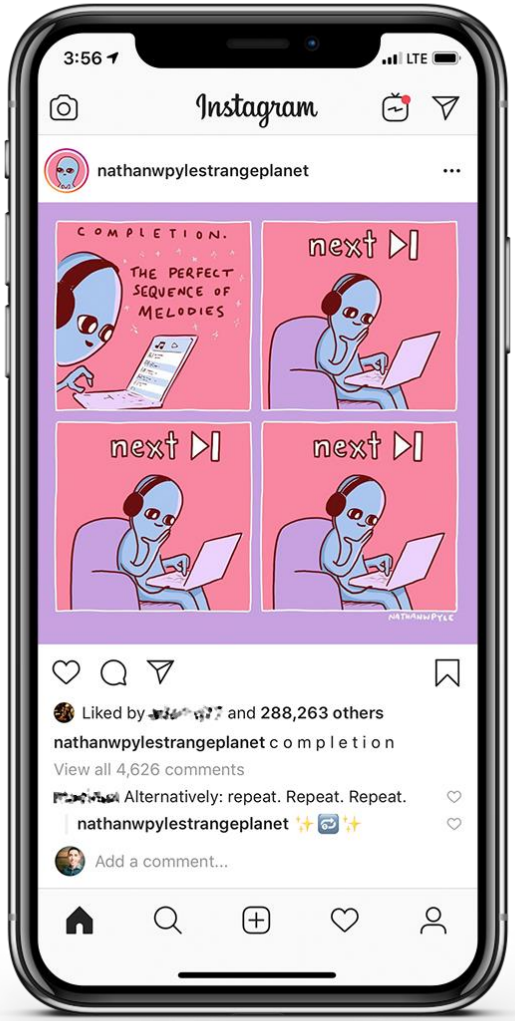
- So now our web and mobile app call **web services** on many machines, hosted in **cloud** service providers
- We're done! *Right?*



Almost Done

What do we need to know to run this service?

- What are people doing with it?
- What do people tap/click on?
- What ads should we show?
- ***What is broken?***



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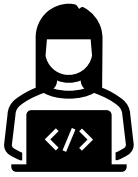
Data Science

- Data science lifecycle: **Capture, Maintain, Process, Analyze,** and **Communicate**
- It really starts with questions
- All of this is so you can make decisions on new features, fixing bugs, optimizing speed, sell ads, etc.

Application Development BAS

The AD BAS Degree Puts this All Together!



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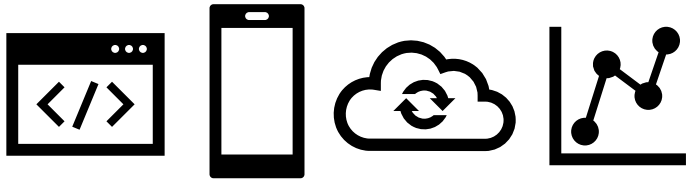

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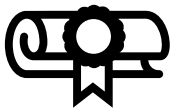

Fully Accredited Bachelor's Degree

Small Class Sizes

Evening Hybrid Courses

Cohort Model

Lower Cost than Universities, Bootcamps, etc. Great Financial Aid

Industry and Academic Faculty Latest Technologies

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Employment

Professional Development Events

Extensive Employment Assistance

- Software Developer
- Web (Applications) Developer
- Associate Software Developer
- Mobile Application Developer
- Software Analyst
- Software Engineer
- DevOps Engineer
- (Technical) Program Manager
- Site Reliability Engineer
- Software Developer in Test
- Quality Engineer
- Member of Technical Staff
- *... among others*


Ripl
avanade
MoxiWorks™
CLARITY
Agitare technologies
Wireless Advocates
SEAGULL SCIENTIFIC
HealthSlate
Sendfie
2A
pluto
brook
Seattle
nanoString
SAP Concur
Expeditors
slalom
isee
Infosys
CDK Global
digitsec
AVEVA
Esterline
unloop
APEX Systems
IBM
Discovery
T-Mobile
NORDSTROM
REDFIN
Uber
cherwell
PHILIPS
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Microsoft
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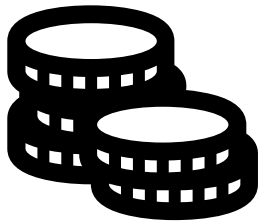
LYNDEN
pala·linq
FLOOP
Expedia
accenture
semble
wave DISYS
PUGET SOUND ENERGY
PSE
salesforce
COMMUNITY HEALTH PLAN
CITY OF
PREMERA

Pay Rates

Software Developer[1]

- **Intern:** $23-48/hour[2]
- **Entry-Level:** $89-122K/year[3]
- **Average 1-3+:** $122-167K/year
- **Experienced:** $130-186K/year[4]



1: *Data is for Seattle Software Developer positions, via GlassDoor*

2: *Outliers on the top side may exceed this range; most internships sit in the $23-48 range per hour. Yearly figures are extrapolated; most internships are 3 months.*

3*: Includes first-year bonuses and stock compensation, as applicable.*

4: Job title would generally change to Software Development Engineer or similar by this point. Management / lead roles would make considerably more.

Contact Us

MICHELLE MELERO (she/her)

Director, Technology Bachelor Degree Programs

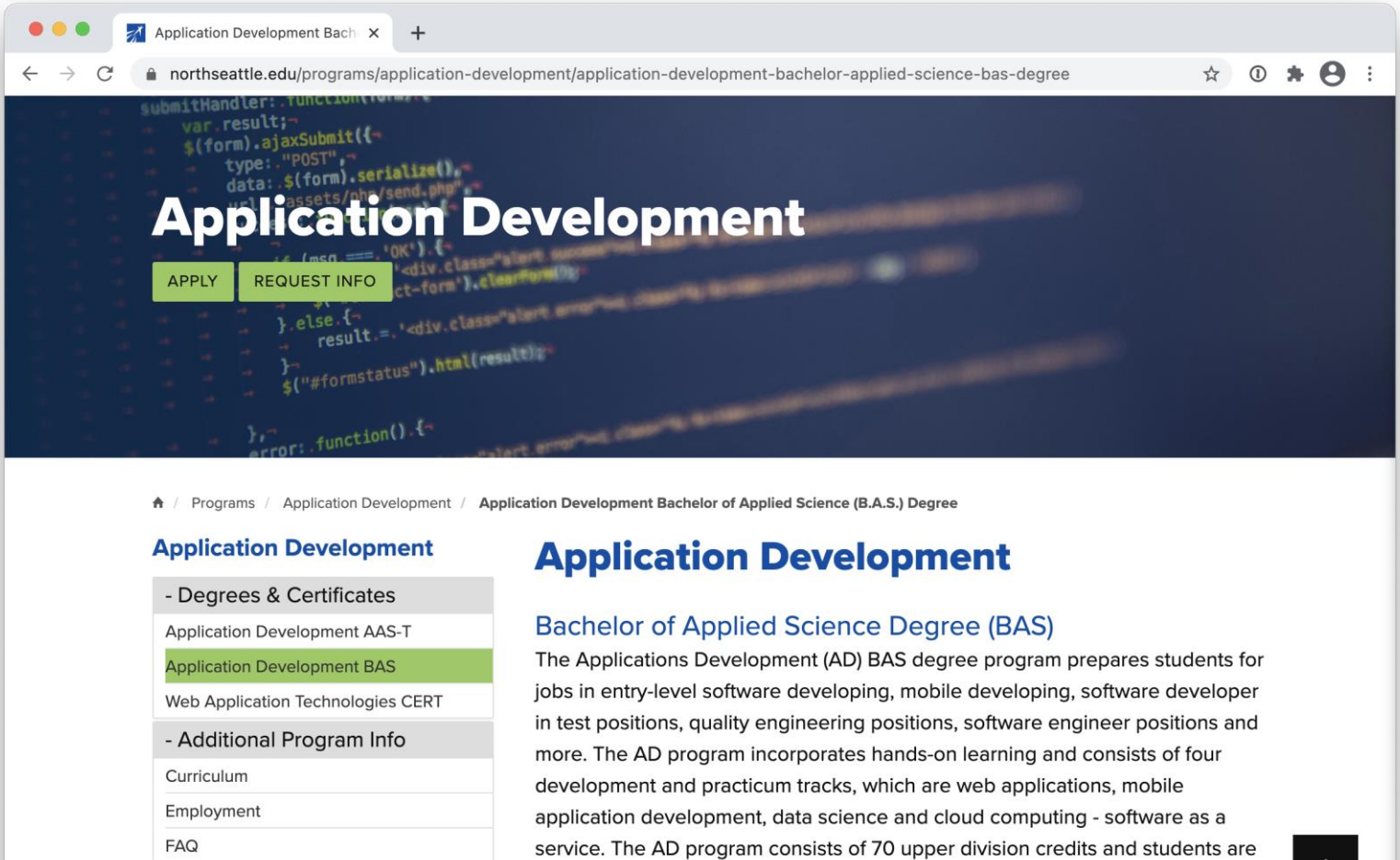
Michelle.Melero@seattlecolleges.edu

206.934.7025

- Review Transcripts
- Decide on Prerequisites
- Answer Questions
- Get you Ready to Apply!

Learn More

https://northseattle.edu/bas-app-development



Q & A

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Appendix A: Applying

Prerequisite Courses

90 Credits including Prerequisite courses

Notable: no full Calculus series and no full Physics series required

Apply Now

Applications are open now for Fall

Complete the AD Program

Finish your final 2 years / 90 more credits with us

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Appendix B: Pre-Requisites

North	Central	South	PREREQUISITES – IT Courses	Credits
CSC 110, CSC 142 , IT 211	CSC 110, CSC 142, IT 111, IT 211	CSC 110, CSC 142	Programing - 5 credits of Object-oriented programming strongly recommended	10
IT 125	IT 120, IT 222, IT 223	N/A	Database Development / Programming in SQL.	5
IT 111 or IT 102	IT 121, IT 122, IT 221 IT 161, IT 162, IT 163	N/A	Web programming / development	5
			PREREQUISITE – General Education	
Quantitative/Symbolic Reasoning Course	Quantitative/Symbolic Reasoning Course	Quantitative/Symbolic Reasoning Course	Quantitative/Symbolic Reasoning (QSR) - Statistics or Pre-Calculus strongly recommended	5
English / Communication Courses	English / Communication Courses	English / Communication Courses	Communication Skills - ENGL& 101	5

Appendix C: Costs

Most cost-effective baccalaureate degree in computer programming and software development

- $**226.53**/Credit in-state tuition
- **$241.75**/Credit non-resident tuition
- $**637.35**/Credit international non-resident tuition

Accepts Financial Aid, Worker Retraining, Veteran's aid, scholarships and other WA State grant Aids

Appendix D: Courses

The following shows an example schedule for someone on the standard, 2-year track:

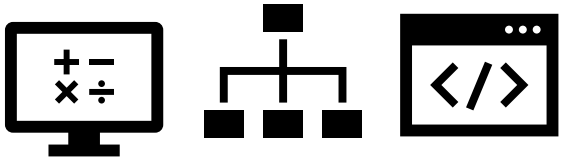
Fall Quarter Junior Year	Winter Quarter Junior Year	Spring Quarter Junior Year
• AD 300 Component Software (5) • AD 400 Project Management in Software Development (5) • General Education Course (5)	• AD 320 Web Application Development (5) • AD 325 Data Structures and Algorithms (5) • AD 350 Relational Database Technology (5)	• AD 410 Web Application Practicum (5) • AD 340 Mobile Application Development (5) • AD 315 Discrete Mathematics (5)
Fall Quarter Senior Year	**Winter Quarter Senior Year**	**Spring Quarter Senior Year**
• AD 430 Mobile Application Practicum (5) • AD 420 Cloud Computing – Software as a • service (5) General Education Course (5)	• AD 450 Data Science Development • AD 440 Cloud Computing Practicum (5) • General Education Course (5)	• AD 490 Internship (5) • AD 470 Data Science Practicum (5) • General Education Course (5)

Appendix E: Computer Science

Coming Soon: Bachelor of Science in Computer Science Degree

https://northseattle.edu/bs-computer-science

Computer Science Fundamentals



Advanced theory courses plus specialization in one or more program areas

Cohort-Based courses made for working adults looking for more of a focus on math and science