ESports Curriculum Vitae

Arun “Matrix” Dunna

January 9, 2019

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Coach and Analyst
Any rates are in USD

January 9, 2019
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(401) 285-0403

Available Positions

Head Coach 4100 - 4500 *SR*
10-20 hrs/week

- **Roles:**
  - Improve macro-level play
  - Improve communications
  - Improve strategy execution through identifying team weaknesses and strengths
  - Formulate strategies based on a variety of factors such as meta and team/player qualities
  - Supervise practice environment and regimen
  - Assist in recruitment process of players and coaches/staff
  - Improve mental attitude of team through reviews and meetings
- **Methods with Suggested Allocation:**
  - Live team VOD reviewing (4-6 hrs/week)
  - Live player VOD reviewing (2-4 hrs/week)
  - Pre-recorded player VOD reviewing (4-5 hrs/week)
  - Live scrim spectating (2-4 hrs/week)
  - Team/player meetings (1-2 hrs/week)
  - Other organization obligations (1-2 hrs/week)
- **Availability:**
  - 7pm - 11pm Mon/Tues/Wed/Thurs/Fri
  - 10am - 11pm Sat/Sun
  - *Other times by scheduling in advance*
- **Rates:** Currently none

Assistant Coach 4200 - 4500 *SR*
5-15 hrs/week

- **Roles:**
  - Improve micro-level play and some macro-level play
  - Improve individual communications
  - Work on implementing feedback from head coach
  - Recognize and improve individual player weaknesses
- **Methods with Suggested Allocation:**
  - Live team VOD reviewing (1-2 hrs/week)
  - Live player VOD reviewing (4-6 hrs/week)
  - Pre-recorded player VOD reviewing (4-6 hrs/week)
  - Live scrim spectating (2-4 hrs/week)
  - Team/player meetings (1-2 hrs/week)

    - Other organization obligations (1-2 hrs/week)
- **Availability:**
    - 7pm - 11pm Mon/Tues/Wed/Thurs/Fri
    - 10am - 11pm Sat/Sun
    - *Other times by scheduling in advance*
- **Rates:** Currently none

Analyst 4200 - 4600 *SR*
5-15 hrs/week

- **Roles:**
    - Review existing compositions and meta in high-tier play
    - Suggest strategies to coaches
    - Analyze opponents in tournament matches for exploits and relay information to coaches/team
    - Analyze team-play for vulnerabilities
    - *All of the above through proper visualizations and development of analytical tools*
- **Methods with Suggested Allocation:**
    - Pre-recorded team VOD analysis (4-6 hrs/week)
    - Meeting with coaches (1-2 hrs/week)
    - Meeting with team (0-2 hrs/week)
    - Extraneous review from other sources (as needed)
- **Availability:**
    - 7pm - 11pm Mon/Tues/Wed/Thurs/Fri
    - 10am - 11pm Sat/Sun
    - *Other times by scheduling in advance*
- **Rates:** Currently none

Hourly Coach Any *SR*
on demand

- **Roles:**
    - Work with team or player for improvement through similar methods to Head Coach or Assistant Coach
    - Review with player or team through requested methods
- **Methods with Suggested Allocation:**
    - Pre-recorded VOD analysis (1-2 hr block)
    - Live VOD analysis (1-2 hr block)
    - Live scrim/competitive spectating (2-4 hr block)
    - Team/player meetings for questions/information (1-2 hr block)
- **Availability:**
    - 7pm - 11pm Mon/Tues/Wed/Thurs/Fri
    - 10am - 11pm Sat/Sun
    - *Other times by scheduling in advance*
- **Rates:**
    - Pre-recorded VOD analysis: *$8/hr flat*

* Live VOD analysis: *$12/hr team, $8/hr player*
* Live spectating: *$14/hr team, $10/hr player*
* Informational meetings: *$5/hr flat*

Overwatch Experience

Assistant Coaching

- **ZeroTwo (4200 *SR*):** 4-8 hrs/week or as needed

Other Coaching

- **NT Atlas Sky (4200-4300 *SR*):** 10-20 hrs/week, player fulfilling coaching obligations (both head and assistant)
- **Hourly Team Coaching (up to 4200 *SR*):** 200+ hrs of hourly team coaching for variety of SRs
- **Hourly Player Coaching (up to 4500 *SR*):** 500+ hrs of hourly player coaching for variety of SRs
- **Self-Review (up to 4300 *SR*):** 1000+ hrs of self-review across Overwatch career

Overwatch Player

- **Peak *SR*:** 4250
- **Hours Played:** 2000+ hrs
- **Roles Played:** Flex/Off Support, Off Tank, Hitscan DPS, Main Support, Projectile/Flex DPS
- **Communications Roles:** Shotcalling, target calling
- **NT Atlas Sky (4300 *SR*) - Flex Support (6 mo):** 6 months, Open Division 2018 S3 8-2 / 28th
- **Hyperion (4200 *SR*) - Hitscan DPS (1.5 mo), Off Tank (5 mo), Main Support (1.5 mo):** 8 months, scrim team climb from 3800 *SR* average to 4200 *SR* average
- **Eminence (Diamond) - Flex DPS (2 mo):** 2 months, joined when first started Overwatch in Season 3

Other Competitive Experience

Head Coaching

- **WarRock (top team NA):** 10-20 hrs/week for 2 years

Other Coaching

- **Counter-Strike: Global Offensive:** 15-20 hrs/week for 1 yr, coached players of all ranks by the hour

Counter-Strike: Global Offensive Player

- **Peak Rank:** Global Elite
- **Hours Played:** 1500+ hrs
- **American Misfits (LEM average) - AWPer (4 mo), Support (3 mo):** 7 months, variety of ESEA/CEVO/FACEIT tournaments
- **Other:** Variety of ESEA/CEVO/FACEIT 1on1 tournaments, 600+ hours of PUGs

WarRock Player

- **Peak Rank:** Number 2 World individual, number 1 NA individual, number 1 NA team
- **Hours Played:** 6000+ hrs
- **Role:** Medic, Sniper, and Assault
- **UK National Team - Player:** 1 national ESL tournament (World Cup equivalent)
- **Pwnography - Player:** Won 3on3 ESL tournament
- **Made in China - Player and Leader:** 2 yrs, top NA team
- **The Chosen Players - Player:** 4 mo, top NA team
- **Clutch Kings - Player:** 3 mo, top 3 NA team
- **Blood, Sweat, and Tears - Player:** 1 yr
- **Other:** Variety of ESL 1on1 and 3on3 ladder matches

Other Relevant Skills

- **Data Science (Analysis):** Web programming for interactive visualizations, LaTeX for reports, Python & R & SQL for data analysis and visualizations, Excel / Spreadsheet Software, years of graduate-level research experience and papers
- **Teaching:** Multiple years of tutoring experience, variety of coaching experience, University course teaching experience

Academic Curriculum Vitae

Arun “Matrix” Dunna

January 9, 2019

Arun Dunna

Research Assistant
M.S. Student

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Research Interests

Networks, network measurement, network security, censorship and censorship circumvention, digital privacy, and financial market modeling.

Education

University of Massachusetts Amherst — Amherst, MA
M.S. Computer Science — *May 2018 – May 2020*

- Advisor: Phillipa Gill
- Notable Courses: Advanced Algorithms (CS 611), Affective Computing (CS 527), Artificial Intelligence (CS 683), Neural Networks (CS 682), System Defense & Pentesting (CS 590A)

University of Massachusetts Amherst — Amherst, MA
B.S. Computer Science, Minor: Mathematics — *Sep. 2016 – May 2018*

- Advisor: Phillipa Gill
- Notable Courses: Machine Learning (CS 589), Detecting Interference in Networks (CS 690B), Artificial Intelligence (CS 383), Financial Mathematics (M 537)

Research

Calipr Lab — Amherst, MA
Advisor: Phillipa Gill — *Jan. 2017 – Current*

- **Multi-CDN**
  A study into performance of CDNs over time, varied by country, source AS, destination AS, and client. Compared local vs. remote caching, and performed studies on developing regions and IPV4 vs. IPV6. Pinpointed strategies in Microsoft's and Apple's deployment of CDNs for delivering software updates to clients, and identified impacts of client CDN migration and changes in CDN routing.

- **Analyzing China's Blocking of Unpublished Tor Bridges**
  A revisit to a series of papers published in 2012 and 2015, taking an updated look at how the Great Firewall of China (GFW) blocks unpublished tor relays, specifically bridge relays. Performed in-depth fingerprinting of GFW active scanners, determined how the GFW performs deep packet inspection (DPI) to detect the presence of Tor traffic, and proposed and tested circumvention methods for Chinese Tor users.

Experience

University of Massachusetts Amherst Amherst, MA
Departmental Assistant *May 2018 – May 2019*

– Departmental assistant in Computer Science department to perform research in Calipr Lab, focused in network theory and coding theory. Working on multiple networks projects, such as "Multi-CDN" and "Analyzing China's Blocking of Unpublished Tor Bridges".

University of Massachusetts Amherst Amherst, MA
Research Experience for Undergraduates *May 2017 – Sep. 2017*

– Awarded stipend from grant to work in Calipr Lab at UMass on network measurement projects, most notably Multi-CDN. Worked on projects throughout the summer, and did key parts of analysis for the final paper.

Aura Political Group Atlanta, GA
Information Technology Specialist *Aug. 2015 – Aug. 2016*

– Developed software and websites for clients. Deployed and managed encrypted communication servers for secure communications between firm and clients.

nMomentum Corporation Atlanta, GA
DevOps *Jan. 2010 – Current*

– Deploy & manage critical network infrastructure (web/storage servers, encrypted file systems, secure remote file synchronization). Develop websites and software for company and its clients.

Skills

- **Languages:** Bash, Bro, C, C++, C#, CSS, HTML, Java, JavaScript, LaTeX, Lua, PHP, Python, R, Ruby, SQL, XML
- **Platforms:** Android, Unix, Windows
- **Specializations:** Cryptography, cybersecurity, Internet measurement, machine learning, networking, software/web development, Unix systems

Publications

1. Rachee Singh, **Arun Dunna**, and Phillipa Gill. Characterizing the Deployment and Performance of Multi-CDNs. *ACM Internet Measurement Conference (IMC)*. Boston, MA. Oct. 2018. **(Acceptance rate 23%)**
2. **Arun Dunna**, Ciarán O'Brien, and Phillipa Gill. Analyzing China's Blocking of Unpublished Tor Bridges. *USENIX Workshop on Free and Open Communications on the Internet (FOCI)*. Baltimore, MD. Aug. 2018. **(Acceptance rate 39%)**

Presentations

- *Analyzing China's Blocking of Unpublished Tor Bridges*
  - FOCI 2018 Presentation – Baltimore, MD (Aug. 2018)
  - CS 690B Course Presentation – Amherst, MA (May 2018)

Teaching

- *COMPSCI 197U - Introduction to Unix*
  - Spring 2019 (Jan. 28 – Mar. 6)

Projects

- **Text-Audio Synchronization Engine**, https://github.com/adunna/tase *Sep. 2018 – Current*

  Scalable and modular synchronization framework designed to associate positions in text with positions in corresponding audio. Primary example is timestamp position in audiobook with word position in ebook. Implemented using DeepSpeech.

- **sCTF**, https://sctf.io *Dec. 2014 – Jan. 2018*

  Founded online capture-the-flag competition focused on K-12 students. Largest had over 4000 competitors (K-12 and university students, industry professionals), and 56000 problem submissions.

- **STASiS**, https://adunna.me/stasis-project/ *Oct. 2016*

  Situational Analysis System: A tool for automatically monitoring for specific situations, such as a fire or a drunk driver, through visual input (picture or video), machine learning, and statistical analysis, all packaged with a nice front-end. Developed in 36 hours at HackUMass 2016, winner of MITRE Award.

Committee Involvement

- **Shadow PC Member** *May 2018 - Jul. 2018*
  ACM Internet Measurement Conference (IMC) 2018

Awards

- **NSF Research Experience for Undergraduates** *May 2017 - Sep. 2017*
  National Science Foundation
- **Chancellor's Award Scholarship** *Sep. 2016 - May 2018*
  University of Massachusetts Amherst
- **MITRE Award (STASiS)** *Oct. 2016*
  HackUMass