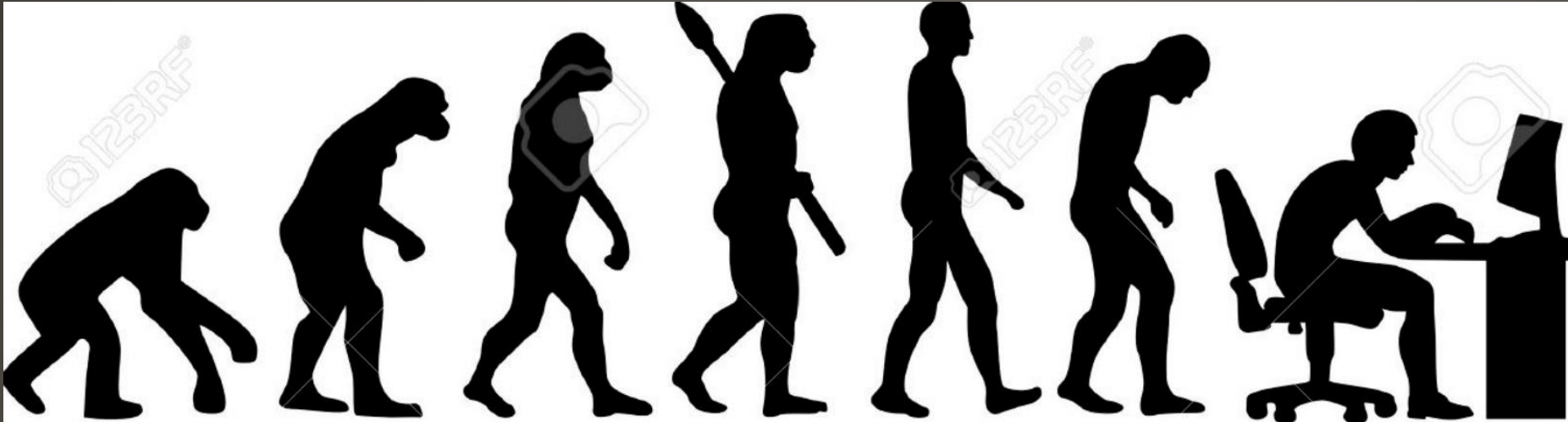# Simplified View of a Programmer's Evolution

- Sushain Pandit

A Typical Programmer's Evolution

We all know about the first phase of evolution... ;-)

However, the next phase …

A Typical Programmer's Evolution

Large Corporate   **Startups**   **Consulting/Freelancing**

A Typical Programmer's Evolution

Large Corporate

- Junior/Associate

- Senior/Staff

- Principal/Lead

- Architect/Manager

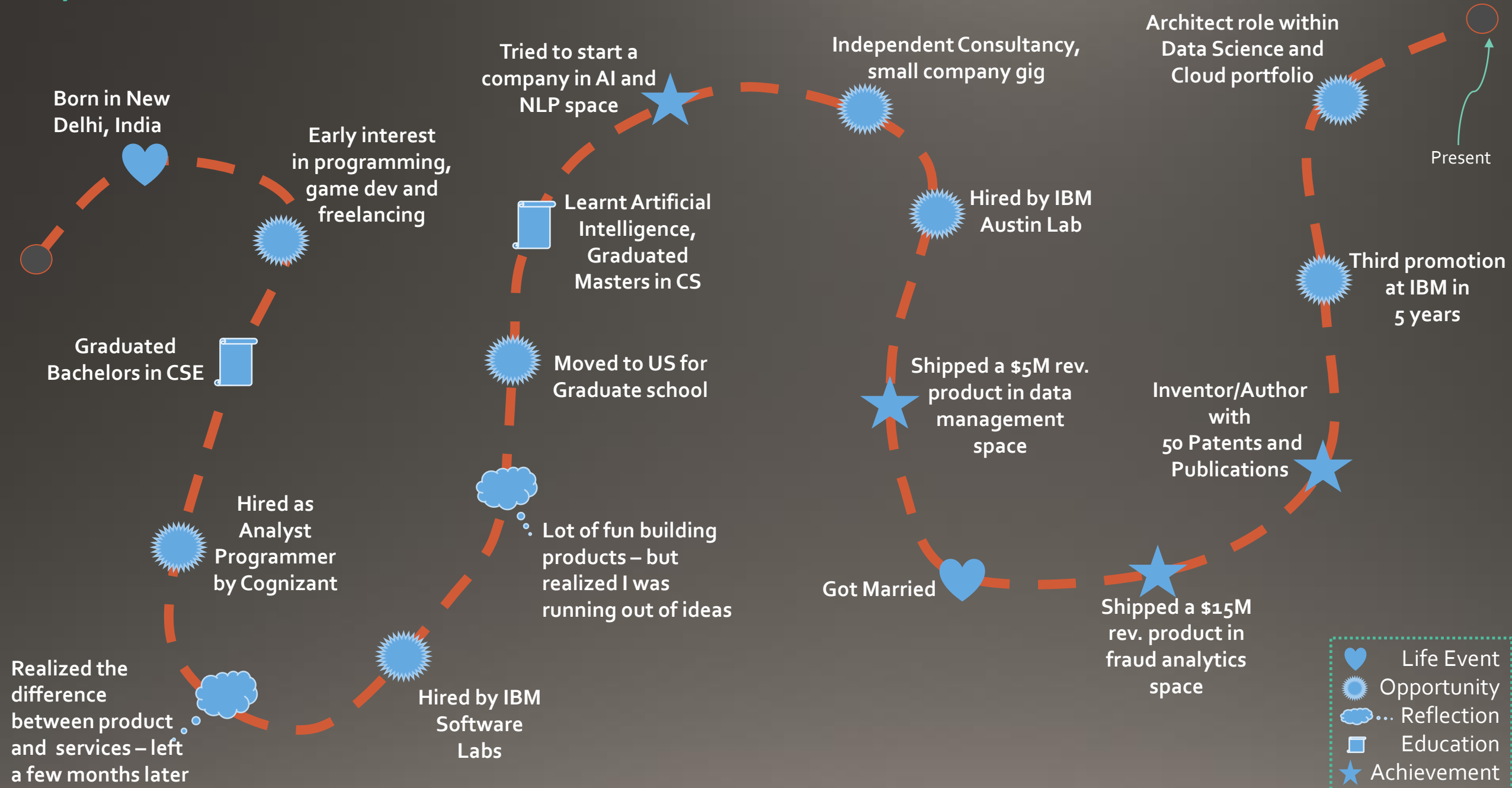- Sr. Architect/Director

- ~ Executive Bands ~

Startups

- Employee # 1-25

- Principal/Lead/Director/Architect/…

- Company gets acquired or IPO

- Cash out and pivot to next startup
  OR
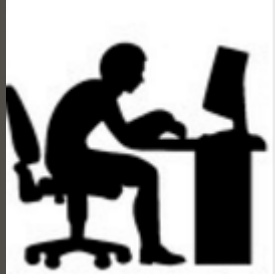 ← Follow 'Large Corporate' lifecycle

Consulting/Freelancing

- Will do anything for $8

- Will be selective at market rate

- Will be selective, work within network

- Able to find work thru referrals

- Able to increase $ based on reputation

My Personal Evolution

Born in New Delhi, India

Early interest in programming, game dev and freelancing

Tried to start a company in AI and NLP space

Independent Consultancy, small company gig

Architect role within Data Science and Cloud portfolio

Present

Graduated Bachelors in CSE

Learnt Artificial Intelligence, Graduated Masters in CS

Hired by IBM Austin Lab

Third promotion at IBM in 5 years

Hired as Analyst Programmer by Cognizant

Moved to US for Graduate school

Shipped a $5M rev. product in data management space

Inventor/Author with 50 Patents and Publications

Lot of fun building products – but realized I was running out of ideas

Got Married

Shipped a $15M rev. product in fraud analytics space

Realized the difference between product and services – left a few months later

Hired by IBM Software Labs

Life Event
Opportunity
Reflection
Education
Achievement

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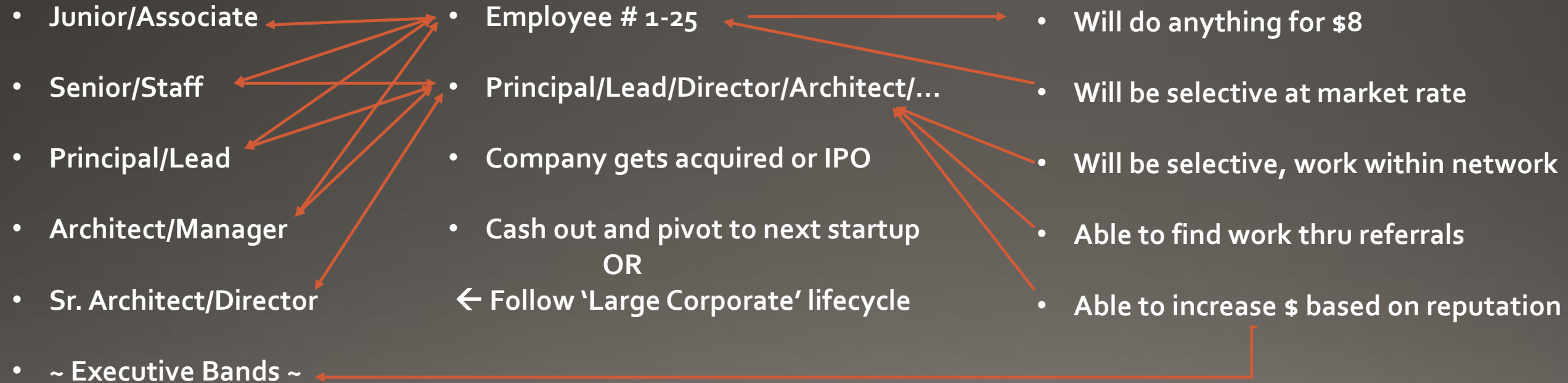- Able to find work thru referrals

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What are the Governing Factors that underlie these transitions?

A Typical Programmer's Evolution

Governing Factors (Personal)

- I want to remain an Individual Contributor – I don't want to manage anything/anyone ever, except myself ☺

- I don't want to manage people but I'm ok leading a project from a technical standpoint

- I might consider a leadership/management role for sake of the product I love

- I feel management is the logical next step because there's no where else to go

- I don't want to be managed by people and I don't want to manage people

- Other factors
  - Want more $$$, benefits, perks, etc.
  - Personal preference for location, flexible lifestyle, remote work, etc.
  - …

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• Senior/Staff	• Principal/Lead/Director/Architect/…	• Will be selective at market rate
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• Sr. Architect/Director	OR ← Follow 'Large Corporate' lifecycle	• Able to increase $ based on reputation
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A Typical Programmer's Evolution

Governing Factors (Personal)

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Skills Expected for a long-term rewarding career

- Implementation
  - Expert knowledge of design patterns, performance metrics, time/space complexity, working at scale, etc.
  - Expert knowledge of popular languages, especially in your 'tier' of specialization (frontend, backend, etc.)
  - Working knowledge across the stack to understand functional design, debugging issues, etc.

- Ops/Process/Testing
  - Up-to-date knowledge of modern devOps tools for build, deploy, test, prod lifecycle

- Communication
  - Being able to express code in somewhat abstract terms
  - Being able to function in an Agile team structure, etc.

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- I don't want to manage people but I'm ok leading a project from a technical standpoint

Skills Expected for a long-term rewarding career

- Design/Architecture/Implementation
  - Ability to work with clients, design solutions, translate requirements into technical specifications
  - Expert knowledge of design patterns, performance metrics, time/space complexity, working at scale, etc.
  - Working knowledge of representative languages across the stack

- Communication
  - Excellent communication to translate business problems into technical language
  - Ability to task and guide individual contributors

- Ops/Process/Testing
  - Excellent ability to manage time, multi-task and fight fires
  - Working knowledge of modern devOps tools for build, deploy, test, prod lifecycle

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Skills Expected for a long-term rewarding career

- Leadership and Communication
  - Excellent communication and ability to understand and map business problems
  - Ability to rally technical architects and principal engineers around your product vision and direction

- Business/Design/Architecture
  - Ability to foresee business imperatives, market conditions and directionality
  - Ability to work with clients and understand requirements from a technical point of view

- Ops/Process
  - Working knowledge of what's required for seamlessly operating a development house

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Governing Factors (Personal)

- I don't want to be managed by people and I don't want to manage people

Skills Expected for a long-term rewarding career

- Communication/Flexibility
    - Being able to explain deliverables to clients
    - Being able to adapt to changing nature of work on a per engagement basis (time-zone, geo, language, tools, etc)

- Implementation
    - Working knowledge of several languages across the stack due to changing nature of engagements
    - Knowledge of design patterns, performance metrics, time/space complexity, working at scale, etc.
    - Working knowledge across the stack to understand functional design, debugging issues, etc.

- Ops/Process/Testing
    - Ability to adapt to new tools, technologies, communication mechanisms according to client needs
    - Working knowledge of devOps tools to simplify project lifecycle for your development house of one

Questions?

Feel free to connect

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